



MEGAPESCA

PROJECT FISH / 2003 / 02

**FRAMEWORK CONTRACT FOR PERFORMING EVALUATIONS,
IMPACT ANALYSES AND MONITORING SERVICES IN THE CONTEXT
OF FISHERIES PARTNERSHIP AGREEMENTS CONCLUDED
BETWEEN THE COMMUNITY AND NON-MEMBER COASTAL STATES**

SPECIFIC AGREEMENT (06): CAPE VERDE

**Interim/*Ex Post* Evaluation of the Current Protocol to the Fisheries
Agreement Between The European Community and the Republic of Cape
Verde, and Analysis of the Impact of the Future Protocol on Sustainability,
Including *Ex Ante* Evaluation**

FINAL REPORT

SEPTEMBER 2004

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ACRONYMS USED

AfDB	African Development Bank
BADEA	Arabic Development Bank
CECAF	Committee for the Eastern Central Atlantic Fisheries
CILSS	Permanent Inter-State Committee on Drought Control in the Sahel
CITES	Convention on International Trade in Endangered Species
CPLP	Comunidade de Países de Língua Portuguesa
CPUE	Catch per Unit Effort
CV	Cape Verde
CDE	Centre for the Development of Enterprise
DGP	General Fisheries Directorate
DGT	General Treasury Directorate
EC	European Commission
ECOWAS	Economic Community of West African States
EEZ	Exclusive Economic Zone
EU	European Union
FA	Fisheries Agreement
FAD	Fish Aggregating Device
FAO	Food and Agricultural Organisation
FDP	Fisheries Development Fund
FPA	Fisheries Partnership Agreement
FTE	Full Time Equivalents
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GoCV	Government of Cape Verde
GRT	Gross Registered Tonnes
HDI	Human Development Index
ICCAT	International Commission for Conservation of Atlantic Tuna
IFAD	International Fund for Agricultural Development
INDP	National Institute for Fisheries Development
IPOA	International Plan of Action
IUCN	International Union for the Conservation of Nature
MCS	Monitoring Control and Surveillance
MHD	Medium Human Development
MSY	Maximum Sustainable Yield
NDF	Nordic Development Funds
NGO	Non-Governmental Organisation
NPOA	National Plan of Action
OGE	General State Budget
SME	Small and Medium Enterprises
TAC	Total Allowable Catch
TACV	Cape Verde National Airlines
TED	Turtle Excluding Device
UNDP	United Nations Development Programme
VA	Value Added

GLOSSARY OF TERMS USED

Ex-ante evaluation: a forward analysis of the impacts of the proposed fisheries partnership agreement, with an assessment of the expected net benefits to stakeholders in terms of performance against a set of agreed indicators. Will also identify conditions, external risks and assumptions which apply to the evaluation, and identify the technical and institutional basis for the monitoring indicators, all of which may affect the subsequent nature, substance and content of the subsequent FPA.

Mid-term evaluation: provides an interim review during the course of the FPA, to test the continuing validity of assumptions, and the adherence of the stakeholders to the FPA conditions. This review also checks to ensure that monitoring indicators are being prepared, and that their values fall within target ranges. Causality of any deviations is investigated and any required corrective actions are proposed.

Ex-post evaluation: provides an historical assessment of the impacts of the FPA after its termination, including as far as possible an indication of residual impacts not yet realised. It also assesses the extent to which specific and general objectives of the CFP have been achieved by the FPA, thus providing feed-back for development of wider policy. Since many FPAs are replaced by new agreements, there can also be a legitimate interest in formative issues at the ex-post stage providing feed-back for the design of future agreements.

Impact analysis: the positive and negative changes produced by an intervention, directly or indirectly, intended or unintended

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EXECUTIVE SUMMARY

1. This report presents the findings of the mission to Cape Verde to carry out an interim/ex post evaluation of the current fisheries agreement between the European Community and the Republic of Cape Verde, and an analysis of a future protocol, including ex ante evaluation of potential scenarios.
2. The **economy** of Cape Verde is classified by the World Bank as a lower to middle-income country, however the small size of the country, respective isolation, lack of natural resources, susceptibility to drought constitute significant constraints to economic development. The structure of GDP is dominated by transport and communications (21%, 2003), with fisheries accounting for just 2%. There is significant economic contribution from migrants, which account for 15% of GDP. The economy is essentially stable, with real GDP growth of 5.3% and inflation of 3%. In terms of human development, Cape Verde ranks in the top two thirds of countries, ahead of South Africa. HIV/AIDS infection rate was estimated in 2000 at less than 3% of adult population which is low relative to other African countries. Unemployment rate is estimated at 22% and one third of the active population lives in poverty.
3. Cape Verde has a favourable climate for **private sector investment and development** based on economic stability, a national currency pegged to the Euro, and a developed structure of laws, incentives, institutions and facilities to support investors. These include an investment promotion agency (PROMEX), industrial parks, special duty free status for export orientated industries and fiscal incentives. National and foreign investors are treated equally under the law.
4. **Fisheries administration**, management and development institutionally falls within the Ministry of Environment, Agriculture, Fisheries and comprises two key bodies: the national fisheries directorate (DGP) and the national institute for fisheries development (INDP). Both human, technical and financial resources are focussed on INDP. **Fisheries policy** is outlined via the national development plan and there is no detailed sectoral policy and strategy statement. However, two initiatives are in hand to address sectoral policy, one of which is specifically focussed on resource management. The main strategic lines defined in the national development plan are: policy definition; upgrading of legislation; inter-sectoral articulation; resource exploitation; upgrading of infrastructure; increasing private sector capacity and training & research.
5. The **legal framework** for the sector is in general both outdated and inadequately regulated. Both licensing and infraction schedules have not been reviewed for more than twelve years, and the existing legislation grants discretionary powers to the Minister in deciding on the degree of penalties. However it also stipulates that all resources must be subject to pluri-annual management plans and defines marking and identification rules in accordance with FAO standards. New legal instruments (including the licensing schedule) are reported to be in the process of being updated.
6. The main **national fisheries stakeholders** are: subsistence fishers in remote communities; small scale artisanal fishers, at least partially linked to the commercial network; semi-industrial and industrial fisheries; tuna processing industry. The artisanal fleet numbers 1,267 open deck vessels, and the semi-industrial and industrial fleet 69 vessels. Of these only 12 are over 15m long. Artisanal fisheries, targeting tuna and demersals, are not only an important source of employment but also account for about 64% of national production. Semi-industrial and industrial fisheries targets tuna, lobsters, small pelagics and to a lesser extent demersals. Tuna catches supply the national processing industry, but are not adequate to maintain processing operations and canneries will periodically supplement supply from the national fleet with imports. In addition to the national fleet, **foreign industrial fleets** fishing in Cape Verde include that of the EC, Japan (7-9 longliners) and Senegal. The Japanese fleet targets bigeye tuna and access has been gained by an exceptional private agreement between GoCV and a Japanese company. License fees paid are relatively high and in principle there is no compensation or linked aid. Access is granted to Senegalese vessels under a reciprocal agreement whereby Cape Verde industrial vessels may fish in Senegalese waters, both fleets only paying local license fees. In principle fisheries law does not create the opportunity for individual private licenses to be issued to foreign vessels.
7. Cape Verde is on list 1 of third countries approved to export to the EC, but the downstream sector has been affected negatively by the country's recent exclusion from the list, resolved in October 03. Two

canneries and an establishment for the processing of fresh fish and live lobster are licensed for export to the EC. In terms of infrastructure, the tuna processing sector is constrained by a lack of appropriate cold storage.

8. The principal **fisheries resources** of interest to industrial fisheries are large pelagics (yellowfin, bigeye and skipjack tuna, wahoo, swordfish) and sharks. According to ICCAT, most of the commercial tuna stocks are now more or less fully exploited.

There is a lack of reliable data on which to base a definitive stock assessment in relation to the main commercial shark species, but there is evidence of a significant decline in the abundance of blue shark. The reporting of shark catches by EU vessels provides insufficient basis for resource management decisions. Given the evidence of declining abundance a precautionary approach is therefore highly advisable.

Shallow water resources and lobsters are re-affirmed by GoCV as only available to national fisheries and very little is known about deepwater demersal resources in the Cape Verde EEZ.

9. The **current protocol** between the EC and Cape Verde opens fishing possibilities for up to 37 freezer seiners, 18 pole and liners, and 62 surface longliners all nominally targeting tuna-like species. The reference catch for tuna is set at 7,000t per year. In addition there are fishing possibilities for up to 4 demersal longliners. **Utilisation** of opportunities has averaged 75%, with high utilisation in the surface longline segment (88%), the pole and line segment (83%) and lower utilisation by freezer seiners (56%) and demersal longline (8%). **Dependency** on the protocol is low for the freezer seiners (0.4%) and surface longliners (6.3%) but estimated to be very much higher for pole and line vessels (35%). Reported annual catch is 1,813t (2002), but it is notable that there is no data for demersal longline segment, very little data for pole and line segment and incomplete data for surface longliners.

10. Fisheries **resource impacts** are measured against ICCAT recommendations which indicate that most of the commercial tuna stocks are now more or less fully exploited. Yellowfin tuna are close to fully exploited and the ICCAT recommendation is for no increase in effort. Although there are TAC levels set, increases in fishing power of purse seiners have given rise to concern, which may indicate that a slight reduction in vessel numbers may be necessary to meet this management objective. No specific changes are considered necessary for the management of the skipjack stock. Bigeye tuna is considered to have been subject to excessive effort of up to 15% beyond the MSY and a reduction of effort is recommended to bring catches to within the TAC, and a limit in catches to the 1991/1992 average level is recommended to be made by the main fishing nations.

There is a lack of reliable data on which to base a definitive stock assessment in relation to the main commercial shark species, but there is evidence of a significant decline in the abundance of blue shark - particularly relevant to the FA as blue shark made up 56% of reported catches from the surface longline segment in 2002. Given the evidence of declining abundance a precautionary approach is therefore highly advisable.

The by-catch of turtles associated with longline fishing is identified cause for concern especially as the species in question are critically endangered and studies indicate not only is the Cape Verde EEZ a longlining hotspot but also that turtle by catch may be a particular problem for vessels targeting swordfish.

Shallow water demersal resources and lobsters are re-affirmed by GoCV as only available to national fisheries and very little is known about deepwater demersal resources in the Cape Verde EEZ.

11. The protocol sets out **financial contribution** at €680,000 per year, of which 41% (280,000) is set aside for targeted actions. Payment of financial compensation (€400,000/yr) is up to date for the first three years of the protocol, although there have been delays in payments. Payment for targeted actions is incomplete for all years of the protocol, and €510,000 is in arrears, being the balance for the first and second years plus that due for the third year of the protocol. Delays have been due to bureaucratic problems associated with the payment of targeted actions into several different beneficiary accounts (especially the confirmation of account details by GoCV), requests for changes in allocations, delays in reporting on the first year and reconfirmation of plans for subsequent years. The Commission reports that payment of outstanding values is currently in process.

12. Principal **problem areas** associated with the protocol and its execution include: inherent inflexibility in the targeted actions programme; delayed payments of financial contributions; poor data reporting by the fleet; inadequate scope of reporting on sharks and other non -tuna-like species (incl by-catch); very limited implementation of an observer programme; the lack of landings for local processing.
13. The financial contribution amounts to 0.1% of total Cape Verde GDP although there has been limited benefit in terms of **institutional development**, primarily due to low disbursement of funds for targeted actions to date. Very significant economic benefits (in excess of financial contributions) accrue to CV from employment of local crew. The current protocol has not succeeded in promoting **investment** in Cape Verde, neither investment from EC vessel operators working within the protocol nor from the application of funds for targeted actions. There is no direct impact of the FA on **poverty alleviation** and **food security**, although there are indirect benefits in both of these areas due to employment of Cape Verde crews.
14. The FA has contributed positively to the **promotion of responsible fishing** through the support for surveillance activities (via targeted actions), but again this has been very limited primarily due to low disbursement of funds. GoCV has only managed to implement a very limited observer programme in spite of adequate provision in the protocol and frequent visits of EC vessels to CV ports.

Poor levels of catch reporting by the EC fleet have made a negative contribution to responsible fishing and more importantly there are serious concerns over the environmental impact of the surface longline fleet on oceanic shark stocks and critically endangered turtles. The latter highlights problems with the suitability of current ICCAT standard reporting forms.

There is a clear inconsistency between the fisheries agreement protocol which is considered as a tuna fisheries agreement, and actual catches in the surface longline segment which are mostly shark.

15. For a **future protocol**, key observations and recommendations include:
 - a. The GoCV intends to i. prohibit the EC pole and line fleet from fishing for livebait in Cape Verde waters in order to protect the resource for national fishers. This will increase segment operating costs; ii. oblige the EC fleet to supply a percentage of tuna catch to local processors. The move however is considered to be still unviable whilst cold storage facilities in Mindelo (INTERBASE) remain inoperative and unlicensed for the EC market; and iii. introduce transshipment charges;
 - b. It is recommended that funds for targeted actions should be made into one single budget (in DG Budget) to facilitate both disbursement and flexibility in the allocation of funds between identified actions. Reporting obligations should however be maintained. Public accountability would be increased if this account were to be in the treasury (as per pure compensation), but this would mean that that access to the funds would be less certain for the sector.
 - c. Following ICCAT recommendations, no increase in effort is recommended in any of the segments targeting tuna species, and the basic scenario for the next protocol should reflect *current levels of utilisation* of possibilities, and not simply repeat current possibilities as this would leave scope for increased utilisation and effort.
 - d. As part of a precautionary approach, it is recommended that possibilities for the surface longline segment be reduced due to environmental concerns related to shark stocks and turtle by-catch. Scenarios for this are projected and it should be noted that this will result in significantly reduced net benefits for both Cape Verde and the Community.
 - e. There are opportunities to assist GoCV with short term technical assistance to establish an MCS programme and improve commercial relations between the CV private sector and the EU (via CDE).

INTRODUCTION

This report sets out the findings of the mission to the Republic of Cape Verde to carry out an interim/ex post evaluation of the current fisheries agreement between the European Community and the Republic of Cape Verde, and an analysis of a future protocol, including ex ante evaluation of potential scenarios. The mission was fielded between 15 and 31 May 2004 and consisted of an economist (team leader), socio-economist and local fisheries specialist. Additional support was also given by an environmental consultant/pelagic fisheries expert.

The current protocol is the forth since a Fisheries Agreement was first drawn up with the Republic of Cape Verde in 1991. The protocol runs from 1 July 2001 to 30 June 2005, having been extended for a further year from the original expiry date of 30 June 2004. The emphasis of the agreement and protocol is on highly migratory fisheries and currently allows access to up to 37 tuna seiners, 18 pole and line vessels and 62 surface longliners. In addition there is also fishing possibility for up to 630GRT/month (4 vessels max) demersal longliners.

The Agreement with Cape Verde is an integral part of the network of agreements on tuna covering the Atlantic zone, which allows the Community fleet to follow highly migratory stocks.

A GENERAL BACKGROUND

A.1 POLITICAL, INSTITUTIONAL AND ECONOMIC CONTEXT

A.1.1 *Political, institutional, administrative and legal framework*

A.1.1.1 *Political Context*

Cape Verde achieved independence from Portugal on 1975, without a liberation war. After independence, one-party Marxist state was formed by the historic independence party (PAICV), followed by widespread nationalisation of property and industry, much of the settler population having returned to Portugal. In 1991 a peaceful multi-party democracy was established, and Cape Verde was the first state in sub-Saharan Africa to hold free elections. From 1991 to the present date, power has changed hands between the two major political parties MPD and PAICV, peacefully through elections. From 1991, MPD was responsible for the implementation of market reforms and heavy investment in education and health accomplishing steady social and economic progress. The MPD significantly strengthened the country's economic and political ties with Portugal as well as with the rest of the EU, relations that are now underpinned by the currency peg to the Euro (which was already the case with the Portuguese currency). The PAICV was returned to government in 2001 after 10 years out of power and continue in power to date.

The current constitution was drafted in 1992, defining Cape Verde as a parliamentary republic and entrenching democratic rights and freedoms. The president is the head of state and is directly elected. Legislative power is vested in parliament, which nominates the prime minister. The prime minister is the head of government, and the cabinet appointed (by the president) following the prime ministers recommendation. The Constitutional Court, established in 1999, has the power to override parliamentary and presidential decisions should they be contrary to the provisions of the constitution. The court acted for the first time in 2002, invalidating proposed tax reforms.

A.1.2 *Macro-economic and budgetary/financial framework*

A.1.2.1 *Macro-Economy*

The economy of Cape Verde is classified by the World Bank as a lower to middle-income country, however the small size of the country, relative isolation, lack of natural resources and susceptibility to drought constitute significant constraints to economic development. In spite of this there has been recent steady

economic progress based on large inflows of foreign assistance, good human resources and a supportive policy environment. Cape Verdean migrants overseas play an important role in the economy with net emigrant remittances in 2000 amounting to 15% of GDP.

Table 1 - Structure of GDP

	2000	2001	2002	2003	2004(proj)	%(2003)	Growth (2003)
	Billions of CV Escudos						
Agriculture, forestry & livestock	6.90	7.12	6.07	6.60	7.07	8%	8.7%
Fishing	1.43	1.42	1.51	1.66	1.81	2%	9.9%
Industry & energy	4.95	4.69	5.63	6.28	6.93	8%	11.5%
Construction	4.94	5.23	6.05	6.58	7.08	8%	8.8%
Commerce	11.50	13.05	14.19	15.15	15.99	19%	6.8%
Hotels	1.47	1.61	1.60	1.80	2.00	2%	12.5%
Transport & communications	12.82	14.18	15.25	16.80	18.29	21%	10.2%
Banks & insurance	2.54	3.11	3.41	3.69	3.92	5%	8.2%
House rental	3.37	3.59	3.79	4.05	4.28	5%	6.9%
Public service	8.71	9.03	9.65	10.77	11.87	13%	11.6%
Other services	1.45	1.53	1.60	1.69	1.77	2%	5.6%
Intermediary banking services	-1.77	-1.91	-2.24	-2.51	-2.78	-3%	12.1%
Total Value Added	58.31	62.65	66.51	72.56	78.23	89%	9.1%
Taxes on imports & subsidies	6.22	7.04	7.91	8.68	9.14	11%	9.7%
Total	64.53	69.69	74.42	81.24	87.37	100%	9.2%
Total (€bn)	0.59	0.63	0.67	0.74	0.79	Real growth	5.3%

Source: IMF Statistics 2004

The manufacturing sector remains small although considerably expanded with new investment in the textiles due in part to an investment policy allowing the establishment of export orientated companies with duty free status (section A.1.5). Fishing accounted for 2.0% of GDP in 2003, but together with agriculture employed about half the country's workforce.

Real GDP growth in 2003 was 5.3% and inflation 3.0%. GDP per capita is estimated at €1,600 being the third highest in west Africa to the oil producing nations of Equatorial Guinea and Gabon.

Low food product, limited natural resources and raw materials result in high levels of imports and dependence on external investment and susceptibility to external shocks especially annual rainfall and world fuel price. The government continues to withdraw from involvement in production and key short term changes include the releasing of price control over fuel and the privatisation of the state controlled national airline, TACV.

A.1.2.2 Budget

The General State budget (OGE) for 2004 is shown in the following table. In principle GoCV compiles and approves accounts of actual expenditure, but no published outputs for this process are available reportedly due to low priority in parliament.

Table 2 - General State Budget 2004

Function	m€	%
General Public Services	34.8	12
Defence	5.3	2
Security and Public Order	12.8	4
Education	60.3	20
Health	25.2	9
Security and Social Benefit	14.9	5
Housing and Collective Development	27.5	9
Recreation, Culture & Religion	4.5	2
Fuel and Energy	3.9	1
Agriculture, Silviculture, Livestock, Fisheries & Hunting	23.2	8
<i>of which Fisheries</i>	7.6	3
Mining, processing and Construction	1.6	1
Transport and Communications	13.0	4
Other Economic services	30.4	10
Other services	38.1	13
Total	295.6	100

Source: Boletim Oficial 31/12/03 1/44

In principle the fisheries sector budget above includes activities that should be funded under the targeted actions programme of the current protocol. It should be noted that there are unresolved differences between the fisheries sector budget published in the official bulletin (above) and that stated by GPE (Table 10, page 19).

The published presentation of receipts under the OGE does not show distribution by sector and it is not possible to present any sectoral correlation between revenue earning and budget allocation in the economy. Revenue by fiscal category is summarised below.

Table 3 - Government Receipts, OGE 2004

Source	€m	%
Fiscal Receipts	145.0	61
Non Fiscal	20.6	9
Capital	2.2	1
Direct Administration	167.8	71
Autonomous Funds	5.1	2
Investment	64.3	27
Total (inc other)	237.2	100

Source: Boletim Oficial 31/12/03 1/44

A.1.3 Donor activity

Net development assistance to Cape Verde is detailed in the following table by country. It is notable that values received under donor programmes more than halved between 1998 and 2001.

Table 4 - Net Development Assistance

€ m	1998	1999	2000	2001
EU Member States				
Portugal	25.9	22.3	21.1	20.6
Luxemburg	8.7	8.1	7.7	4.8
Netherlands	10.4	13.3	5.5	3.8
EC	16.5	8.0	1.5	1.5
Japan	3.1	9.1	9.9	3.0
World Bank	25.2	25.4	9.4	14.1
AfDF	1.5	9.4	6.4	5.4
others	54.3	50.2	25.5	15.5
Total	145.6	145.8	86.9	68.7
Grants	109.4	81.9	67.6	36.6
Credits	40.5	68.2	17.8	28.7

Source: EIU 2004

A.1.4 Social dimension*A.1.4.1 Recent history*

Cape Verde is a former Portuguese colony peopled with slaves from the African continent, having derived a mixed-race population as a result of 500 years of interaction with different European nationals. The dominant religion is Roman Catholic. During most of Cape Verde's history the population has grown only slowly, held back by devastating famines and severe droughts which have led to high levels of emigration in the past. However, the population has grown rapidly since independence and is now around 463,000 persons although there is an uneven distribution due to a high internal migration, primarily towards the island of Santiago where the capital, Praia, is located, to Mindelo at S. Vicente and to the islands devoted to tourism. About 55% of the population lives on Santiago, and nearly 25% on Praia.

Migration overseas has been a long-standing historical phenomenon, although recently the trend has decreased. The émigré community is estimated at 500,000 or more, living mainly in the US and EU. Therefore the majority of Cabo Verdians live outside of their country.

A.1.4.2 Profile

Cape Verde is firmly placed amongst the Medium Human Development category of countries, being a result of the years of steady economic growth and investment in human development which have occurred since 1991. The UNDP ranked Cape Verde in terms of HDI as 103rd out of 175 countries. In comparison with the 43 countries of sub-Saharan Africa, this is the second highest ranking, behind Mauritius and ahead of South Africa. Neighbouring continental countries, Mauritania and Senegal, figure amongst the Low Human Development category. The principal socio-economic indicators are shown in Table 5 and Table 8.

The population of Cape Verde, as estimated in 2002 is around 463,000. With an annual growth rate of 3.9%, the population is expected to rise to 600,000 by 2015. Average GDP/capita is USD 1,438. The UNDP study indicates an average GDP per capita (PPP USD) of 5,570, while the average MHD is 4,053.

Table 5 : Population and main economic indicators

Indicators	Cape Verde			Neighbouring Sub Saharan African Countries	
	2001	2002	2003	Mauritania	Senegal
GDP per capita (PPP USD)	5,570			1,990	1,500
GDP market prices (USD) per capita			1,438		
Estimated consumer price inflation			3%		
Population (millions) ^{/a}		0.46			
Population (millions)	0.4			2.7	9.6
Urban population (%)	63.6			59.0	48.1
Population under age 15 (%)	40.9			43.2	43.8
Population above age 65 (%)	4.5			3.4	2.4

Source: EIU 2004; UNDP 2003; ^{/a} based on local data

School enrolment in Cape Verde is very strong and consistent. There is universal school enrolment and adult literacy has increased from 36% of the total population in 1970 to 75% in 2001, around 13% above the sub-Saharan African average and only 3% below the average of MHD. Enrolment at university level has also improved, having in the last 20 years been characterized by a constant flow of students to different parts of the world to undertake courses in Brazil, EU, US and, in the past, Eastern Europe. Frequently many of these people returned under an obligation to work in institutional and governmental areas. The provision of education at all levels has become an important objective and in 2003 the government allocated 26% of budgetary expenditure to education.

Education has long been recognized as one of the ways for social and economical growth and illiteracy identified as a fundamental and determining factor for poverty. Therefore Cape Verde has not only been worried with educational attainments of children and young people but also of illiterate adults having provided between 1990 and 1995 basic education to 20,507 adults (5.3% of total population in 1995).

Table 6 : Human development indicators 2001

Indicator	Cape Verde	Medium Human Development	Sub Saharan Africa
Human Development Index	0.78	0.68	0.47
HDI rank	103	n.a.	n.a.
Human Poverty Index	20.1	n.a.	n.a.
Life expectancy (years)	69.7	67.0	46.5
Adult literacy rate, of people over age 15 (%)	74.9	78.1	62.4
School enrolment (% of total school age population)	80.0	64.0	44.0
Probability at birth of not surviving to age 40	7.6	n.a.	n.a.
Infant mortality rate (per 1,000 live births)	29.0	45.0	107.0
Children under 5 mortality rate (per 1,000 live births)	38.0	61.0	173.0
Fertility rate (children per women)	3.3	2.4	5.6
HIV/AIDS – estimated sero-prevalence rate (%)	-		8.6

Source: UNDP 2003;

Life expectancy has improved from 52 years (1960) to 69.7 years (2001), the highest rate in Sub-Saharan Africa, 2.7 years above the average for MHD and approaching that of European countries. This reflects, in part, a comparatively well-developed healthcare system. The infant mortality rate (29), although rather high in comparison with European countries, is much below the average MHD (45) and the average for Sub-Saharan African countries (107). The health system has received considerable attention from the Cape Verdean government and from 1993 to 1999 the infant mortality rate has decreased from 52.1 to 29.1. The government allocated 9.8% of budgetary expenditure in 1998 for health and 8% in 2003.

The problems of water supply and of sanitation, however, remain, with some outbreaks of cholera occurring in recent years. However, in comparison, Cape Verde shows higher levels of population, between 71 and 74%, having access to improved water sources and sanitation against an average of between 53 to 57% for Sub-Saharan Africa (Table 7). At present a programme, supported by €1.5mEDF funding, for providing the whole population with drinking water by 2005 has been setup by the government.

Table 7 : Health Indicators: Access to basic services, 2000

Population with:	MHD	Cape Verde	Sub-Saharan Africa	Neighbouring Sub Saharan African Countries	
				Mauritania	Senegal
	% of total				
- access to improved sanitation:	51	71	53	33	70
- sustainable access to improved water sources	82	74	57	37	78
- sustainable access to affordable essential drugs		80-94		50-79	50-79

Source: UNDP, 2003;

Analysis of other livelihoods indicators from national statistics is shown in the following table, giving a better perspective on how potable water supply and sanitary condition has been established, with only 25% of the population having access to net supply and about 10% to the public sewage net. In respect to energy utilization half the population has access to electricity and about 66% use gas for cooking.

Table 8 : Livelihoods

Population with:	%
Access to potable water	76.7
Access to potable water net supply	25
Connection to sewage net	9.7
Access to electricity	50
Using wood for cooking	32.9
Using gas for cooking	65.6

Source: INE – Census 2000

With regard to HIV/AIDS in Cape Verde, limited studies carried out in the two main cities, Praia and Mindelo, suggest that the rate of adult infection has risen steadily from 0.46% in 1989 to 2.86% in 2000, which is low by African standards.

A.1.4.3 Employment: Gender and Poverty

The estimated actual active population in 2003 was about 166,000 people, 89,000 male (54%) and 77,000 female (46%), from a total population Census survey in 2000 of 439,601 (with a gender distribution of 47.8% male and 52.2% female).

A study of the workforce showed that 130,000 were employed with an unemployment rate of 22%. Gender wise, the unemployment is higher amongst the females (19,000) than within the males (17,000), although the difference is not significant.

About one third of the active population lives in poverty. Amongst the unemployed the proportion of poor people and non poor is practically equal (49% poor and 51% non poor), with gender differences being residual. But, unemployment affects the poor much more than the non poor. In fact about 20% of the poor are unemployed while in the non poor the figure is only 10%, with gender difference being of 1% for both cases.

The unemployment rate is naturally higher amongst the poor. While for the population in general the actual unemployment rate was 22%, for the poor it was 33%, more than the double the rate registered for the non poor (16%). When comparing gender issues the unemployment rate is 7% higher for poor females. In addition women are also affected by long-term unemployment (more than 12 months), which affects about 71% of the poor who are usually unemployed (females represent 58% and males 42%).

Employment security is also rather weak, although the employed poor population were employed for 70% of the time during the 52 weeks of the year, 20% of these were unemployed during one third of the year.

Table 9: Workforce, aged more than 15 years old, according to poverty status

Active Population	Poor			Non Poor			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Employed	20,213	16,578	36,791	51,606	41,810	93,416	71,819	58,388	130,207
Unemployed	8,437	6,432	17,869	8,886	9,419	18,305	17,323	18,851	36,174
Total	28,650	23,010	54,660	60,492	51,229	111,721	89,142	77,239	166,381
<i>Actual Unemployment rate (%)</i>	29	36	33	15	18	16	19	24	22

A.1.4.4 Fish Consumption

Consumption of fish products was in 2000 around 26.2 kg per capita. Fresh fish is the main type of product being consumed, being distributed by women street vendors or at fish markets. Other types of fish products are also consumed such as frozen fish, being principally imported or distributed from the island of S. Vicente to Santiago, and dried and salted fish being more common in remote areas.

Production of fish and agriculture products accounts for 10-15% of total nutritional sources of the country, representing an important structural food deficit, although fish resources are an important source for food security mainly for rural communities. It is very common for farmers to go fishing when weather conditions (ex. very dry seasons) do not favour agriculture and do not allow them to obtain sufficient food from their crops. In such instances subsistence artisanal fisheries become essential for families usually dependent on agriculture and without any other earnings.

A.1.4.5 Social Policy

Cape Verde is developing the final PRSP during 2004. In 1987, a National Program to Fight Poverty (PNLP) was designed and the present government has reaffirmed intentions for its implementation, through the Great Options of Plan and specific action plan (National Development Plan) having targeted relief of poverty as its central aim for development.

The Government of Cape Verde proposes as its mission “to enable Cape Verdeans to reach a level of economic income and quality of life that values human dignity” by applying “an economic policy that guarantees a sustainable development that is compatible with social, regional and inter-generational solidarity, and that is suitable with environmental durability and based on a growth pattern that is grounded on growing production... a development that mitigates poverty and social exclusion and that is based on equity and social justice”.

The Great Options of Plan (2002-2005) – the strategic agenda for governance – defines as the 4th Option, to promote a global policy of social development, poverty reduction and strengthening cohesion and solidarity. The objectives of the Great Options of Plan constitutes the framework of reference for the implementation of the Governments Program approved by the National Assembly, thus defines the basic structure of the National Development Plan.

The priority objectives are to:

- improve social access in the areas of health, education, housing and drinkable water supply;
- improve the access of the poor to financial resources;
- promote employment activities that generate sustainable income;
- to promote the poor's participation in food security and poverty reduction;
- reform the public employment environment;
- reform of the social security system, assuring the extension and the sustainability of the different regimes and of an effective system;

The Country Strategy Paper has been drawn up, for which the cooperation funds of the EU (EDF) have been defined in respect mainly to health and education and the general objective for the health policy continues to be the improvement of the health status of the population with particular focus on preventive medicines, especially in the sector of maternal-infant protection. The most important strategic elements are:

- achieve a complete geographical distribution of sanitary infra-structures and respective qualification of these;
- training, specialization and recycle of medical and nursing staff;
- effective control of endemic and epidemic illness;
- reduction of precocious maternity and improvement of effective services for family planning;
- increase of information, education and communication;
- promotion of a private medical service of quality, compatible with the public sector one;

In respect to education the priority goes towards strengthening the first obligatory six years of school accompanied by a quality upgrade. The interventions consider the following actions:

- improvement and increase of the infrastructure (schools and equipment);
- guaranteed access of all to school manuals (including poor children);
- qualification and recycling of teachers;
- introduction of computer science/technology to primary school and strengthening of this discipline at secondary level;
- introduction of a foreign language at primary level;
- financial viability of the education system;

The education at University level is guaranteed for the majority, who are able, outside the country, through scholarships conceded by each of the receiving countries. A significant decrease of the number of scholarships would seriously affect the capacity of Cape Verde in preparing highly skilled personnel in numbers and with the necessary qualifications for their countries continued development. This kind of education represents 22% of the budget of the Ministry of Education.

A.1.5 Conditions for private sector development

Cabo Verde already has an enabling environment to build a competitive private sector. The “export processing” incentives for the light industry companies manufacturing for exports is already in force and legal framework for foreign investment is very liberal. Currently, three industrial parks (Mindelo, Praia, and Sal) have already been established. In addition, the labour force is reasonably skilled so that the level of training required is minimal.

The government may need to upgrade the current industrial parks and also build new ones to ensure that infrastructure issues are not a problem, providing facilities where power and water supply are regular and firms can easily rent factories and warehouses. Inter island transportation (whether air cargo or ferry) will be important and will be improved. The efficiency of public administration is crucial for the take off of this and any other sector. The public administration reform process would be speeded up in order to ensure the global competitiveness of Cabo Verde’s industries.

Further to providing the necessary environment for light industries, the government will aggressively market Cabo Verde in order to attract foreign investors from US, Europe, Asia and, possibly, Mauritius. It is agreed that efforts must be made quickly in this area to attract firms to begin to set up textile factories in Cabo Verde. In this regard, professional presentation materials will be produced on the different sectors to market Cabo Verde as an excellent destination for investment.

The government’s private sector strategy focuses on PROMEX for foreign investment and export promotion. To promote domestic investment and to avoid an increasingly imported economy, the Ministry of Economy, Growth and Competitiveness also intend to support SMEs. There are three public or partially public agencies that offer services to SMEs:

- 1.) IADE, which offers a range of BDS to SMEs,
- 2.) SDE (Enterprise Development Agency), which provides a line of financing to MSMEs, and
- 3.) IIEP (the Institute for Professional and Job Training), which targets micro and small informal enterprises for financing and subsidized training.

In addition, the Ministry of Economy, Growth and Competitiveness is considering plans to initiate a National Council for Private Sector Development as a focal point for public/private dialogue.

- **Foreign and domestic investment policy**

Cape Verde's major policy objectives on investment are to promote and encourage a transparent and fair business environment for both domestic and foreign investors, and to increase the role of the private sector in Cape Verde's development process. To achieve these objectives, the Government adopted the Foreign Investment Law (Law No. 89/IV/93, published in Official Bulletin 13/12/93) and the Industrial Statute (Decree Law No. 108/89 published in Official Bulletin 30/12/89).

The Foreign Investment Law sets the conditions for foreign direct investment made in any sector of economic activity. All sectors are open to investment, unless the enterprise is a threat to national security, the environment or public health, or it violates domestic laws and regulations.

The new investment policy ensures that applicable procedures are open, efficient, and transparent. Investors can easily obtain clear guidance on these procedures from the Centre for Tourism and Export Promotion of Cape Verde (PROMEX), a government department under the supervision of the Ministry of Economy, Growth, and Competitiveness charged with promoting trade and investment opportunities in Cape Verde.

- **Competition policy**

The regulation of competition policy in Cape Verde is based on the need to provide for product diversity, economical, rational, and technical advances (Preamble of Decree Law No. 2/99). These underlying principles have led to the creation of Competition Advisory Council, an independent quasi-judicial government entity, which is not yet operational. The Council's primary function would be to adjudicate unfair trade claims, but it would also propose draft legislation to the government. Decisions of the Council would be appealed to the courts.

The Government also created independent regulatory agencies with competence over negotiations of quality, quantity, and price with the monopolistic concessionaries, resulting mainly from the privatization of some enterprises (Resolution No. 70, 71, 72/98 published in the Official Bulletin No. 48, I Series, 5th Supplement of 31st December). Of the three agencies created, ANSA (National Food Security and Staple Goods Agency) which regulates food security is the only one that is operational [Decree Law No. 29/2002 of 9 December, Official Bulletin No. 35, 1st Series, of 9 December 2002]. The functions of the other two agencies ARM (Multisectorial Regulatory Agency), regulating fuel, telecommunications, water and power, transports, civil aviation, environment and similar, and ARFA (Regulatory and Supervisory Agency for Pharmaceuticals and Food Products), regulating pharmaceuticals drugs presently are conducted by the relevant government ministries.

A.1.6 Protection of the Environment

Cape Verde is one of the top 10 coral hotspots in the world, the most important breeding site in the Western Atlantic for the endangered Loggerhead Turtles, and a breeding ground for Humpback whales.

Although the economy of the country is based primarily on the exploitation of natural resources and agriculture, concerns over environmental management have only recently gained national attention. The government has drafted a new National Environmental Action Plan (2003) and the country's 17 municipalities are being given expanded responsibilities and authority for environmental management.

There is also a growing interest in international conventions (e.g. Ramsar, Migratory Species, CITES etc.). Furthermore, over the coming years, municipalities will be drafting environmental action plans based on local priorities and with considerable input from local communities. Most of the technical skills related to environmental issues however are linked to central government institutions. Municipalities and civic institutions like NGOs have had little experience in the sector.

- **Conservation Policies and Programmes**

During the last decade, the government of Cape Verde has taken various legislative and institutional measures to promote the conservation and sustainable use of the country's biodiversity. The first National Environmental Action Plan was produced in 1994 (PANA I), and is currently being revised with support from the Netherlands (PANA II). Similarly, each of the country's 17 municipalities will soon begin drafting local environmental strategies and action plans. New legislation has been passed establishing 47 protected areas including 3 with important marine elements (Baia da Murdeira (Sal), Parque Natural do Norte (Boavista) and Parque Natural das Terras Salgadas (Maio), this includes a classification system ranging from fully protected integral reserves to multiple use zones, and plans to identify protected species. Cape Verde has also ratified several international treaties and agreements related to, or affecting, biodiversity such as the Convention on Combating Desertification, Convention on Climate Change and the Convention on Biological Diversity.

With regard to the latter, and in consultation with different stakeholders, Cape Verde developed a National Biodiversity Strategy and Action Plan (NBSAP, 1999). The main objectives of the NBSAP are to control environmental degradation and to conserve natural resources. The ecosystem approach was identified as the most appropriate way to achieve these objectives, and several critical habitats, including marine, coastal and wetlands were identified for in-situ conservation as protected areas. Various programmes and projects were also outlined in the areas of legislation, research and monitoring, reinforcement of existing institutions, (eco-) tourism, capacity building, and environmental awareness.

Though the need for conservation and sustainable use of biological diversity is recognized in various government and sectoral policies and plans, in reality there are still several major gaps. Cape Verde has only found the resources to undertake very few of their priority projects.

- **Opportunities for biodiversity conservation**

Cape Verde has a unique biological diversity. Several national and municipal institutions (Directorate General for Environmental (DGA), National Institute for Research and Agricultural Development (INIDA), and the National Institute for Fisheries Development (INDP), Directorate General of Marine and Ports) have clearly articulated the threats and conservation needs.

However implementation of environmental conservation and management programmes has been limited by a lack of funds, inadequate technical support and, perhaps most importantly, a severe lack of information and awareness at all levels. Fortunately, this situation is changing. Many different Cape Verdean conservation institutions and organizations are seeking support to enhance their capacity to implement programmes and carry out activities themselves.

At the invitation of the government of Cape Verde, WWF and WI, with support from the Royal Netherlands Embassy in Dakar, set out to assess the possibility of developing a collaborative project for marine, coastal, and wetlands biodiversity management. Such a project would respond to local and national needs and dovetail with activities undertaken by other organizations, (GTZ, GEF, UNDP, and Netherlands Cooperation). One such activity, implemented under UNDP with GEF support addresses the policy and legal and institutional framework for environmental conservation and participatory management of protected areas, the establishment of marine protected areas, the development of alternative income generation activities, and providing public awareness and education support.

A.1.7 Relations with the main external partners

Cape Verde has traditionally courted aid and investment from a variety of countries including Angola, China, Cuba, the Gulf States, Israel, Luxemburg and South Africa. In the early 90s relations with Europe, especially Portugal, were strengthened culminating in the pegging of the Cape Verde Escudo to the Portuguese Escudo and subsequently to the Euro.

Cape Verde is a member of the Comunidade de Países de Língua Portuguesa (CPLP), a Portuguese-speaking version of the Commonwealth formed in 1996, whose objectives are to promote the Portuguese language, cooperation between member states links between members and the EU and Mercosur (the South American trade block). Cape Verde is also a member of the African Union, the Economic Community of West African States (ECOWAS) and the Permanent Inter-State Committee on Drought Control in the Sahel (CILSS).

A.2 GENERAL BACKGROUND ON FISHERIES

A.2.1 Physical characteristics

A.2.1.1 Oceanographic features

The Cape Verde archipelago is situated in the Eastern Atlantic, between 14° 50' - 17° 20' N latitude and 22° 44' - 25° 30' W longitude, 375 miles to the west of Senegal and Mauritania¹. It is made up of 10 islands and 5 islets which were originally formed by volcanic activity. The archipelago covers an area of 4,033 km square². The Exclusive Economic Zone (EEZ) is relatively large, at 734 265 km square, but the insular shelf which is around 200m in depth is only around 5,934 km square³, 0.8% of the whole area. The climate is dry and tropical, and there are two well defined seasons: - a cold and dry season, from December to June with an average sea surface temperature (SST) between 21 – 22°C, and a warm and wet season, from July to November, where the SST is between 26 - 27°C⁴.

From the surface to 50m in depth, the seawater is at its warmest in the south-east of the archipelago, but the highest temperatures are found at lower depths in the northern part, between 100-200m, especially in the well known fishing grounds around Santo Antão, São Vicente, Santa Luzia and São Nicolau⁵. There are also seasonal variations in the thermocline, which is located between 40-70m of depth throughout the year⁶.

Little is known about the temporal patterns of primary productivity in Cape Verde waters and the results from the few different studies undertaken are contradictory. In 1982-1984 the productivity was estimated to be 150-500 mg of chlorophyll / m² per year, which is considered relatively high, with low seasonal variability⁷. In 1997 the estimates of primary productivity were relatively low, varying between 0.1 to 0.46 mg of chlorophyll / m³⁸.

Upwelling occurs around some of the main sea-mountains (Nova Holanda, João Valente and Noroeste de Santo Antão), important fishing banks are located in these regions⁹.

¹ SEPA, 1999

² Bravo de Laguna, 1985

³ Bravo de Laguna, 1985

⁴ Almada, 1993

⁵ Almada, 1993

⁶ Diouf, 1992

⁷ Diouf, 1992.

⁸ IPIMAR, INDP, 1997

⁹ Almada, 1993

Due to the climatic influence of the Sahara, the lack of fresh water and the limited extension of the island shelf, the biodiversity around Cabo Verde is lower than on the continental coast of Africa and marine resources are more scarce.

A.2.1.2 Principal maritime resources of commercial importance

Despite the country's small size, Cape Verde's large offers clear opportunities in fishing and exploitation of marine resources. By global standards, Cape Verde fishery resources are not considerable but they do include: tuna, small pelagics, demersal fish, lobsters and other less commercially important species.

The major large pelagic fish resources targeted in Capeverdean waters are:

- yellow-fin tuna (ICCAT code YFT) - *Thunnus albacares*, which is the target of a dispersed fishery consisting of Capeverdean artisanal boats and the industrial fleet
- bigeye tuna (BET)- *Thunnus obesus* which is targeted mainly by foreign fleets (Long-line),
- skipjack tuna (SKJ) (*Katsuwonus pelamis*) , a smaller tuna which is normally found in the tropics,
- wahoo (WHO) (*Acanthocybium solandri*),
- other migratory pelagic species such as *Euthynnus alleteratus* (little thunny) and atlantic swordfish (*Xiphias gladius*), which are also targeted by both artisanal and industrial fishing vessels.

The small pelagic fish, in particular, *Selar crumenophthalmus* and *Decapterus macarellus* have occupied, over the years, an important place for Capeverdean fishers, not only because of the abundance of the fish throughout all the seasons, but also because they provide an excellent food source for predatory fish. The small pelagics fishery has developed very quickly over the last years, particularly since 1991. These fish are caught by coastal purse seine vessels some of which are open decked with outboard motors (15 Hp).

There is also a great variety of demersal fish in the Capeverdean EEZ, which are exploited mainly by artisanal fishermen using hook and line. The morphology of the bottom, which is mostly rock, prevents the use of demersal trawl gears. The species most frequently exploited in the Capeverdean waters are:

Scientific Names	Local Names
<i>Cephalopholis taeniops</i>	Garoupa
<i>Mycteroperca rubra</i>	Badejo
<i>Pseudopenus praensis</i>	Salmonete
<i>Sphyræna guachancho</i>	Bicuda
<i>Ephinephelus Sp.</i>	Meros
<i>Diplodus Sp.</i>	Sargo
<i>Lutjanus Sp.</i>	Goraz
<i>Lethrinus atlanticus</i>	Bica

Most of these species are of a high commercial value and are exported directly to European markets particularly: Portugal, Italy and France.

Four species of lobster are caught on the continental shelf of Cape Verde, pink spiny lobster (*Palinurus charlestoni*), green spiny lobster (*Panulirus regius*), brown spiny lobster (*Panulirus echinatus*), and slipper lobster (*Scyllarides latus*).

The pink spiny lobster lives in depths of around 100-350 m, the largest density being at around 200m (INDP, 1996), it is exploited by the national industrial fleet. The other lobsters are coastal species and live at depths from 0-60m.

A significant number of marine resources are traditionally caught or collected within the immediate coastal zones of the different islands. Very little or no study on these resources has been undertaken and published, so far. The species to be found there include squid (*Loliolopsis chiroctes*, *Loligo duvauceli*, *Loligo brasiliensis*),

cuttlefish (*Sepia officinalis*) and octopus (*Octopus vulgaris*) which are the most targeted resources, and various bivalves (*Pecten keppelianus*) and gastropod molluscs, including the limpet (*Patella vulgata*). There is also a small fishery for deep sea species such as the black scabbardfish (*Aphanopus carbo*), the monkfish (*Lophius vaillanti*) and various deepwater sharks (*Centrophorus spp.*)

A.2.2 Fisheries Policy Environment

A.2.2.1 Fisheries Policy

Cape Verde has no current detailed and specific policy or strategy statement for the fisheries sector, only general guidelines set out in the National Development Plan 2002-5. The plan acknowledges the lack of a political framework for the sector and foresees both the definition of policy as well as a resource management plan.

Principal Strategic Lines for the sector as defined in the National Development Plan:

- i. Definition and implementation of a policy for environmental protection
- ii. Updating of legislation and supportive instruments to the new development context
- iii. Articulation and synergy with other sectors
- iv. Resource exploitation, directed by a strategic plan
- v. Renovation and modernisation of productive structures
- vi. Upgrading of technical and organisational capacity of private sector to play a lead role in development
- vii. Definition and implementation of training and research policies, directed at resolving identified problems and supporting modernisation and development

There are two major policy development initiatives already in hand, both of which are essentially complete but lack final approvals.

- a. A *fisheries strategy document* has recently been drawn up with the support of FAO as part of national strategy for the agricultural sector.
- b. A *resource management plan* (*Plano de Gestão de Recursos da Pesca*) has also been developed and sets out not only to establish measures related to sustainable exploitation (related to i above) but also resource allocation and access (iv above). This too has not yet been approved, published or adopted by the government as official policy. Relevant to the EC fisheries agreement, the management plan will reaffirm access to the following specific resources for national fleet only: Industrial seine fishery for small pelagics; Industrial trap fishery for lobster fishery; Conch, lobster and demersal fisheries (diver based).

The fact that both the National Development Plan and the National Strategy for Agriculture are initiatives that cross other sectors and form part of a wider policy framework, suggests that fisheries policy is / will be well integrated into the national policy framework.

The lack of access to the key policy documents in preparation does not allow any analysis as to the degree of integration of national fisheries policy with regional agreements. However Cape Verde is signatory to the Commission Sous-régionale des Pêches (CSRP) which sets out to facilitate harmonization of policies concerning the preservation, conservation and exploitation of fisheries resources, and cooperation among the countries with a view to deriving maximum benefit from the resources for their populations. Under this agreement the Government of Cape Verde has participated in regional surveillance operations, outlined in section A.1.1).

• Investment promotion policy in the fisheries sector

There is no specific investment promotion policy for the sector, but a strategy has been adopted based on a degree of State intervention to try encourage national investment. This includes a 40% subsidy on the price of ice, grants for investment of up to 20% of project value and subsidies on commercial interest payments of up

to 50%. In addition, prior to 2000 support was also given in the form of provision of bank guarantees for credits. All of these are managed through the FDP.

DGP is keen to encourage investment in the sector especially in areas which will bring significant national added value and employment such as fish processing. A suitable legal framework for investors exists (see section A.1.5), treating foreign and national investors alike. As part of investment development strategy for the sector, the government continues to privatise state assets, including the cold storage facility (INTERBASE) in Mindelo.

- **Strategy for separating the different roles of the public authorities and non-governmental agents**

There is no rigidly defined strategy in the fisheries sector for separating the roles of public authorities and other entities, but key observations include:

- The State continues to maintain and even expand direct involvement with production. Key processing & storage infrastructure (INTERBASE) although in the process of privatisation remains under Ministerial control, and it is foreseen that a new holding company will be set up (with the state a major shareholder) to manage 10 pole and line vessels financed under the Industrial Fisheries Project.
- The State continues to directly subsidise private operation in the sector (managed by FDP) through support for inputs (ice) and direct subsidies for investment loans.
- There are no NGOs currently operating in the sector

The State clearly sees its role as that of supporting national private sector operators, both by direct subsidy and even to the extent of forming joint investments. In the case of the 10 pole and line vessels, mentioned above, the investment would otherwise be unviable in the open market¹⁰.

- **Private sector environment in the fisheries sector**

The private sector environment in the fisheries sector is characterised by continued State intervention, founded on the belief that this is a necessity in order to be able to compete with subsidised foreign fleets (especially the EC fleet). Specific actions include financial support for investment in the fisheries sector and the subsidising of the cost of ice. Both of these are managed by the FDP, using State resources. FDP can concede grants of up to 20% of investment value, and support 50% of commercial interest payments. In the past FDP has also provided guarantees for commercial private sector loans. FDP continues to subsidise up to 50% of the cost of ice, at a cost to the state of about €91,000 per year. In general however, commercial banks are more interested in financing trade related businesses (with fast repayment rates and capable of supporting real interest rates) than fisheries sector investments.

The experience of the Industrial Fisheries Project (INDP with BADEA support) has shown clearly that the support and subsidies available are still not sufficient to allow the Cape Verde private sector to flourish in fisheries. The ten 26m pole and line vessels built under the project were originally intended to be sold to the private sector via commercial credit but it proved difficult to find investors with adequate management capacity able to provide appropriate credit guarantees.

A.2.2.2 Fisheries Budgets

The budget available for the implementation of sectoral policy is set out in the following table for 2001-2204, together with some data on executed accounts. DGP reports that in recent years the gap between budget and execution has grown wider on account of disbursement problems with both the treasury and donors.

¹⁰ pers comm. M. Fortes INDP

Table 10 - Fisheries Sector Budgets

m€	2001	2002	2003	2004
Budget				
Investment	6.2	12.5	9.4	8.6
Recurrent	1.9	2.0	5.8	0.5
Total	8.1	14.5	15.2	9.1
Executed				
Investment	2.3	10.3	-	-
Recurrent	-	-	-	-

Shaded data: operating budget for whole ministry (incl Ag & Env)

Source: GPE

In general there is high dependence in the sector on external funds, especially for investment projects. In 2004 90% of investment budget is projected to come from external sources (

Table 12). DGT reports that in principle all financial contribution from the current FA (0.68m€/yr) is ring fenced for use in the sector and for 2004 this would be equivalent to 8% of total investment budget for the sector. Sources of external support is set out in Table 13

Detailed breakdown of the 2004 recurrent and investment budgets are presented in the following tables. It is notable that DGP per se benefits from only a relatively small fraction of resources, and INDP gets the lions share.

Table 11 - Fisheries Recurrent Budget 2004

€m	DGP	INDP	Total
Personnel	0.10	0.28	0.37
Goods and services	-	-	-
Supplies and external services	0.01	0.12	0.12
Transfers	-	-	-
Other expenses	-	0.00	0.00
Capital expenses	0.00	0.00	0.00
Total	0.10	0.40	0.50
Percentage	21%	79%	

Source: GEP

Table 12 - Fisheries Investment Budget 2004

Category	€m	%
Reorganisation and development of fisheries	5.36	
Fisheries Statistics	0.06	
Food quality & safety	0.94	
Promotion of alternative livelihoods	1.34	
Nature & Biodiversity Conservation	0.87	
Total	8.57	
of which Donor/Loan	7.75	90
Treasury	0.82	10

Source: GEP

Budgeted external assistance to the fisheries sector is detailed in the following table. The contribution of the Fisheries Agreement to the sector is clearly visible in the table but, as detailed in section A.6.2.2, slow disbursement of funds have meant that the reality of what has been supported by the FA is very much less than that indicated. It is noteworthy that the budget allocates expenses to FA funding in excess of the value of the targeted actions programme (0.280m€/yr), confirming that at least part of the pure compensation is retained in the fisheries sector.

Table 13 - Budgeted external funding in the fisheries sector (2002-04)

Source	Project	2002/ ^a	2003	2004
		m€		
AfDB, IFAD	Industrial Fisheries Development	2,014	3,531	4,238
EU FA	Accreditation of fisheries laboratory			0,318
	MCS support		95	95
	Strengthening fisheries inspection		1,482	82
EU FA Total			1,577	495
Germany	FOPESCA- Artisanal fisheries assistance	252	509	1,069
Holland	Research and conservation of marine biodiversity		697	869
Japan	EEZ research		757	582
	Extension of Fisheries Quay, Praia	7,489		
	Improved fisheries infrastructure and vessels		36	91
	Improved quality and value of fisheries products		136	409
Japan Total		7,489	929	1,082
Nordic Funds	Construction of fisheries quays & infrastructure	0.063		
Grand Total m€		9,818	7,243	7,753

Source: GEP /^a Executed**A.2.2.3 Scientific research policy in the sector**

Fisheries scientific research at Cabo Verde is exclusively carried out by INDP - *Instituto Nacional de Desenvolvimento das Pescas* – (National Institute for Development of Fisheries), being under the Ministry of Agriculture and Fisheries. The institute has juridical status, with administrative and financial autonomy, and has its own patrimony. INDP also has autonomy to manage their scientific and technical activities. Researchers and all staff are submitted to an internal regulation, similar to the one of public enterprises.

The major goal of INDP, is the development of studies of the fisheries sector, in order to propose recommendations targeting better socio-economic results in the fisheries, including inputs for the Cape Verdean National Development Plans and Government Programs. INDP contributed, along with a team of consultants, to the recently developed *Plano de Gestão de Recursos da Pesca* (Fisheries Resource Management Plan).

INDP is also responsible for development of fisheries statistics from artisanal and industrial activities, having a well organized national program to collect data.

INDP, in the last 10 years has been developing activities through projects co-financed by the African Bank of Development, Agriculture Development International Fund, Arabic Bank of Development, and Nordic, Holland, Japan, Republic of China, Germany and Iceland Funds. The institute has an oceanographic research vessel although it has not been working for 4 years due to engine problems.

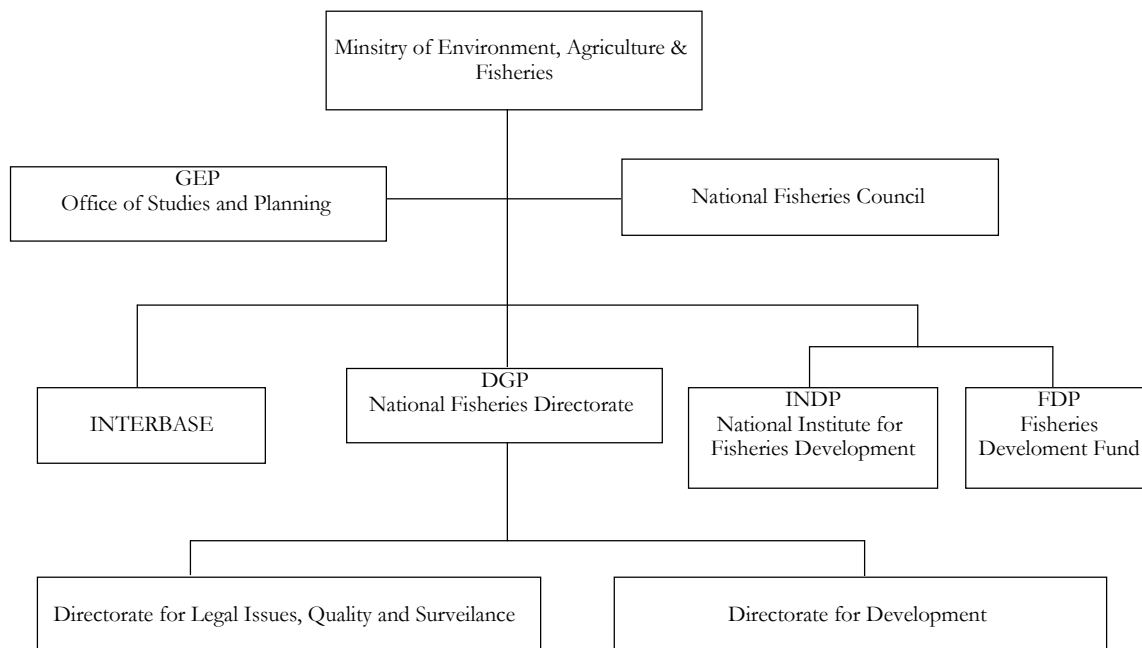
Research activities of INDP staff indicate a very irregular and inconsistent performance through the last 10 years, and a very poor development of papers to be published in international recognised magazines of the area. Motivation of staff is scarce although some researchers have occasionally contributed papers to international and regional journals and at conferences or other events. However, the policy of the institution does not pressure to have work “peer reviewed” and published. There are no researchers developing research or integrating international research work specifically related with resource assessment of highly migratory resources (tuna, swordfish and shark species). Only the coastal species, lobster and small pelagics, are focus of stock assessment. In respect to demersal species there is very little work being done.

INDP produces a regular yearly Statistical publication, *Boletim Estatístico*, which presents the fisheries statistics with a 2 year delay. There is also a technical-scientific publication, which was only published once, in 1993, with several of the papers being presented by INDP researchers. The last *Boletim Bibliográfico* (Bibliography Bulletin) containing reference to all the papers, reports and studies amongst others produced by INDP staff was published in 1996.

Present researchers obtained their background and degrees in the areas of Marine Biology, Fisheries, Oceanography, Fishing Technology, Fish Processing at Universities in Portugal, Norway, Iceland, ex-Soviet countries, etc. Pos-graduations are however, very limited with only two people in INDP with a Masters degree. Nowadays, there is a Cape Verdean Institution (ISECMAR – Instituto Superior de Ciências do Mar) with links with University of Algarve in Portugal, located in S.Vicente, where BSc courses in Marine Biology and Fisheries are available, giving rise to the potential of a new skilled human resources to integrate into INDP.

A.2.2.4 Institutional dimension of the fisheries sector

The fisheries sector falls within the Ministry of Environment, Agriculture, Fisheries and comprises two key bodies: the national fisheries directorate (DGP) and the national institute for fisheries development (INDP). The organogram of the sector is presented below - it is notable that the INDP (which heads all research and development activities) is directly responsible to the Minister and not to the Director General for Fisheries.



National Fisheries Council

A relatively new body, established as a forum to discuss both policy, strategy and regulation between relevant government institutions and other stakeholders, including the private sector.

DGP

Primary body responsible for policy and strategy development, resource management, licensing and MCS, quality control of fisheries products. 16 civil servants

INDP

Based in Mindelo, São Vicente, responsible for marine research, fisheries development and promotion of aquaculture. Has administrative and financial autonomy and operating directorates of Marine Research, Promotion of Fisheries Development, Studies and Projects, Administration and Finances and a regional representation responsible for the leeward (sotavento) group of islands. 94 civil servants.

FDP

The Fund has mandate to promote fisheries development through the concession of subsidies and incentives for both investment and operations in the sector. It relies totally on central funds for financing and its operation is described further in section A.2.2.1. Operation and effectiveness of the fund is limited by lack of resources and a very limited number of staff.

INTERBASE

A state company with 4500 tonnes of cold storage capacity in the port of Mindelo, São Vicente. The company is currently in the process of privatisation.

A.2.2.5 Principal relevant fisheries legislation

The fisheries framework legislation is constituted by Law-Decree 17/87 which defines the general principles, and updates and compiles the previous legislation from the colonial period. It was regulated by Law-Decree 97/87 distinguishing between industrial and artisanal fishing vessels and setting rules on licensing, control and surveillance. It was later amended by Law-Decree 72/92 which mainly updates the infractions procedures and scheme for infringements, and reviews the procedure for registry of chartered foreign fishing vessels. The legal framework is completed by Law 60/IV/92 that defines the maritime borders of Cape Verde and by several other legal instruments dealing with the following issues:

- Fisheries Planning and management:
 - Law-Decree 67/97 approves the new Statutes of the National Institute for the Fishery Development (INDP);
 - Law-Decree 25/94 creates the Fund for Fishing Development;
 - Order 58/87 approves fishing licences taxes.
- Fishing vessels and fishing activities:
 - Law-Decree 19/2003 establishes the legal regime for chartering of foreign fishing vessels;
 - Law Decree 4/2000 regulates registry of marine and fishing activities including rules on crew;
 - Law Decree 37/98 regulates the registry of vessels;
 - Law Decree 39/98 establishes methods for calculation of fishing vessel tonnage;
 - Law Decree 26/94 creates the Integrated Fund for Assistance to Fishing Productivity;
 - Decree 55/90 defines industrial fishing vessels and identification rules.
- Fisheries surveillance and control:
 - Law-Decree 9/99 establishes the EEZ Surveillance Fund.

- **Conservation measures, licence and penalty scheme for infringement**

The maritime waters boundaries are presently defined by Law from 1992 which generally provides the sovereign right of Cape Verde over the exploitation, conservation and management of the marine resources in waters under its jurisdiction and requires the protection and conservation of the marine environment in the EEZ. It further prohibits any activities causing pollution or jeopardising the marine environment.

The fisheries law (FL) subjects the uses of fisheries resources, as well as their conservation, to pluri-annual fisheries management plans elaborated by the competent body of the fisheries sector with public and private stakeholders participation through Local Fisheries Councils. The plans are approved by Council of Ministers and widely disseminated being granted the right of free access. Until the adoption of the first management plan the uses of the resources shall take into account the precautionary principle.

Many conservation measures requiring further regulation were however never adopted such as: establishment of local fisheries councils; rules on beach seining and closed areas; banning of certain fishing types. Also FL prescribed in 1987 the closed season for lobster (01/07 to 30/09) and marine turtles (01/07 to end of February) which were never reviewed or adjusted.

The fisheries licences are issued annually, and are renewable, non-transmissible, (except when expressly authorised by the Minister of Fisheries), and may be revoked or suspended for management reasons. Except for foreign vessels based in Cape Verde, or others expressly authorised by the Minister of Fisheries, foreign

fishing vessels can only operate under an international agreement which is subject to national legislation and shall include *inter alia* provisions applicable to individual licences, fishing zones, and financial contributions.

All vessels operating in Cape Verde must be registered and, according to the FL, only international fishing vessels are required to pay a fee for fishing licences. However with the adoption of specific legislation establishing the licensing fees, payment became a requirement for artisanal and industrial fishing vessels independently of their flag and in accordance with the fishing gear, length and tonnage of the fishing vessels. The licence fee has not been updated since 1987.

Industrial fishing vessels are subject to FAO Marking and Identification standards. Non-compliance with this obligation constitutes an offence. Moreover the masters and owners of foreign fishing vessels are required to fill in logbooks and to keep records and report promptly to the port authorities on their catches, position, entry and exit from Cape Verde jurisdiction as well as allow observers on board. The submission of false data is a serious offence but authorised officers have not been granted adequate protection on board since obstruction, interference or intimidation is not an offence under the existent law.

The National Institute for the Fishery Development (INDP)¹¹ acts as a body of the National Statistics System¹² with regard to statistics and is competent for data collection and statistics production on catches, fishing vessels, fishing licences and biological data.

The Minister of Fisheries may require the owners of foreign fishing vessels to present a plan of the fisheries operation with the aim of facilitating the management of the fisheries resources uses. The Minister may also require them to operate with a local partner except for foreign vessels under an international agreement.

Boarding and signing of seamen is regulated since 2000 requiring the existence on board of a list of crew members and their individual capacities. Non compliance with this obligation constitutes an offence.

The penalty scheme for infringement was fixed by general law and was last updated in 1992 depending on the technical and economic characteristics of the fishing vessel, type of fishing activity and economic benefits obtained from the illegal activity. However the existent law does not deprive the offender from the benefits. On the other hand the inclusion of appropriate presumptions of fact and law, which are regarded as true unless the contrary is proven, facilitates securing convictions.

The application of sanctions is based on joint liability between the owner of the vessel and the person causing the infraction. The amount of penalties varies depending on the type of infraction. For serious offences the penalties can be fixed between a minimum of 1,000,000 ESC (€9,100) and a maximum of 5,000,000 ESC (€45,500) and may accumulate with seizure of the catches, fishing gears or other instruments; suspension or revocation of the fishing licences and suspension of the State support to fishing operations undertaken in third states. Fishing without licence is a very serious offence and the application of enforcement measures depend on whether it was caused by a national¹³ or international fishing vessel¹⁴.

In case of repeated non-compliance the amounts of the fines will double which may accumulate with seizure of catches and gears. It is considered repeated non-compliance the practice of another offence by the same agent within twelve months from the first conviction.

The Minister of Fisheries is the competent authority to fix penalties superior to 200,000 ESC (€1,800) (otherwise, the competence belongs to the General Director of Fisheries) and to establish any accessory sanctions.

In 1999 the EEZ Surveillance Fund was created to finance maritime and air control and surveillance activities with the aim of preventing illegal activities and ensuring the safety of the maritime communities. Appropriate regulations governing the fund have never been drawn up and the fund has never been effectively operational.

¹¹ Statistics Division- def.gep@cvtelecom.cv

¹² National Institute of Statistics- <http://www.ine.cv/Apresenta%C3%A7ao/INE/LocaisDeAtendimento.asp>

¹³ The amount of the fine varies between 1,000,000 ESC and 8,500,000 ESC together with seizure of all catches on board. In case of repeated non-compliance seizure of fishing gear or other instruments can be prescribed.

¹⁴ The amount of the fine varies between 1,000,000 ESC and 10,000,000 ESC and seizure of the fishing vessels, gears or other instruments can be prescribed.

• **National Policy Objectives and the Cape Verdean Legal System with relevance for fisheries**

The Fundamental Law¹⁵ prescribes as a fundamental task of the State “the protection of the natural resources and the environment”. The right to a clean, healthy and ecologically balanced environment is a fundamental right of all citizens which requires the adoption of policies promoting the sustainable use of natural resources. With regard to international law the Constitution establishes that accepted or ratified international agreements constitute part of the Cape Verdean legal regime and prevail, after their entry into force, over all national legal acts except the Constitution.

The Government Organic Law¹⁶ attributes to the Minister of Environment, Agriculture and Fisheries competence to coordinate and implement the fisheries and marine resources policy. It also establishes that the Minister acts in articulation with the Minister of Defence regarding the surveillance of the EEZ and with the Minister of Foreign Affairs in negotiating management programmes within specialised organisations in the water sector.

According to the National Development Plan for the period 2002-2005¹⁷ the strategy for the fisheries sector aims at increasing the productivity and exploring opportunities highlighting the importance of international fisheries agreements and promoting the adoption and implementation of conservation policies, sustainable exploitation of fisheries resources and strengthening of institutional capacities. The fisheries strategy comprises three programmes within which specific measures are set such as: elaboration, publication and application of fisheries resources plans; update and dissemination of fisheries legislation; creation of a fisheries observers and inspectors body; processing and dissemination of statistical data; MCS implementation.

The Framework Law on Environment¹⁸ based on the precautionary principle aims at optimizing and ensuring the sustainable use of natural resources. Through its regulation a very innovative set of rules on surveillance was adopted classifying as environmental crimes (and therefore subject to imprisonment) the violation of rules on *inter alia* water and air pollution, waste management, EIA and obstruction of inspection by authorised officers.

Furthermore, the legal regime for protected areas recently defined¹⁹ aims at contributing to the conservation of the natural and cultural resources promoting the sustainable development of the country in articulation with the tourism policy. It establishes the national network of protected areas which includes natural reserves, national and natural parks, natural monuments, protected landscape, and sites of scientific interest, and contains management and economic instruments, organizational rules and infringements procedure including fines which vary depending on whether the infraction was caused by a natural or legal person.

With the adoption of the Foreign Investment Code in 1989 there has been a clear trend to attract foreign investment through a system of fiscal and customs incentives, rights and warranties based on the principle of non-discrimination between national and foreign citizens. Since 1992 specific incentives for export and re-export activities are granted. Furthermore any enterprise producing or trading goods and services for export or sale to other free-zone enterprises installed in Cape Verde is allowed, since 1999, to apply to the status of free zone with the corresponding fiscal and custom incentives and ability to export and import not subject to authorisations or quotas.

Specifically on the fisheries sector legislation was adopted in order to promote, through public incentives and funds, the undertaking of projects aiming at developing and modernising the sector. The Fund for Fishing Development²⁰, which manages the Integrated Fund for Assistance to Fishing Productivity²¹, comprises non-refundable grants, exemptions from customs duties and taxes and financing of training activities for national

¹⁵ Adopted in 25.09.1992, was amended in 1999, BO n.º 43, Série I from 23.11.1999.

¹⁶ Law Decree 30/2002 from 30.12.2002 (<http://www.governo.cv/>).

¹⁷ Ministry of Finance, Planning and Regional Development, Volume II, P 1-308.

¹⁸ Law 86/IV/93 from 26.06.1993 regulated by Decree 14/97 from 01.06.1997, BO n.º 25, Série I.

¹⁹ Law Decree 3/2003 from 24.02.2003, BO n.º 5 Série I.

²⁰ DL 25/94 from 18.04.1994, BO n.º 207 Série I.

²¹ DL 26/94 from 18.04.1994, BO n.º 211 Série I.

companies. The Minister presides to the management of both funds. Annually the list of projects as well as the amount and nature of the support granted by the public system is made available.

- **International and regional agreements**

Cape Verde is a contracting party to several international and regional agreements in the fisheries sector.

With regard to international conventions Cape Verde ratified in 1987 the Law of the Sea Convention²² but has not ratified the Agreement relating to the implementation of Part XI of the Convention nor the Agreement for the conservation and management of straddling and highly migratory fish stocks. It is also a contracting party to the International Convention on Tonnage Measurement of Ships which entered into force in 1982.

At the regional level the water boundaries treaty with Senegal was approved in 1993 by Resolution 29/IV/93.

Cape Verde has signed the Convention on Fisheries Cooperation among African States Bordering the Atlantic Oceans in 1992. The Convention entered into force in 1995 but Cape Verde has not ratified it to date.

Cape Verde participates at the Ministerial Conference on Fisheries Cooperation between African States bordering the Atlantic and at the Conference of Ministers of Fisheries from Portuguese Speaking Countries created in 1995.

Cape Verde is a member to the Committee for the Eastern Central Atlantic Fisheries (CECAF) and since 1979 to the International Commission for the Conservation of Atlantic Tunas (ICCAT) having accepted the Paris Protocol in 1993 but not signed the Madrid Protocol yet. Also it ratified the Convention for the Establishment of a Sub-Regional Commission on Fisheries in 1988 and is a member to the Sub-Regional Commission on Fisheries (SRCF) within which the following legal instruments were adopted: Convention regulating fishing activity within the waters of Member States²³ and Convention on sub regional cooperation with regard to the right of hot pursuit.

Cape Verde is not a party to the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (FAO Compliance Agreement) which entered into force in April 2003.

Cape Verde is a Party to the Convention on the Conservation of Migratory Species of Wild Animals and has signed the multilateral Memorandum of Understanding, from 01.07.1999, concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa. Under the MoU, which contains a comprehensive Conservation Plan, signatories have agreed to adopt measures for the conservation and strict protection of marine turtles at all stage of their life, review and adapt legislation and exchange scientific and legal information.

A.2.2.6 Description of other agreements with international fishery partners (public or private)

Cape Verde has reciprocal fisheries agreements with neighbouring countries Senegal, Mauritania and Guinea-Bissau, although only Senegal has sent industrial vessels to fish in Cape Verde EEZ. The agreement between Cabo Verde and Senegal is renewed annually and is dependent on the number of licenses available for both countries and applies only for vessels with the flag of one of the countries and with majority ownership of nationals being from Cape Verde or Senegal. Fishing areas are defined for tuna fishing and small pelagics fishing. The agreement between the fleets refer to the following:

- Requests of licenses are established between both authorities of the countries;
- Every vessel allowed to fish, has to declare catches to the authority of the country where they are fishing.
- Vessels pay standard local license fees when fishing in waters of the partner country

²² Law 17/III/87 from 03.08.

²³ Approved for ratification by Resolution 38/V/96 from 30.12.1996, BO n° 44, Série I.

In addition there is a contract with a Japanese Producers Association for Japanese longline fishing vessels, targeting tuna, to fish in Cape Verde since 1997. The agreement is not bilateral between States and the Japanese vessels pay special license fees of €6,700 (\$8,000) per 6 month season - considerably greater than those stipulated in the current regulations. Assistance to the sector from the government of Japan (primarily support and construction of infra-structures in the fisheries sector, including the new fishing port in S.Vicente and improvement of the harbour at Praia) is in principle not related to the presence of Japanese vessels in Cape Verde waters.

Other types of contracts / licenses may issued to foreign individual vessels on a case by case basis and always in respect of the fisheries laws and regulations and limited to the catch of tuna species. The law however does not make allowance for private foreign operators to obtain a fishing license outside of a bilateral agreement (as detailed in A.2.2.5) and the agreement with the Japanese is seen as a special case. There were no other reported private licenses issued to foreign vessels. Permission to fish coastal resources in Cape Verde is not granted to foreign fishing vessels under any circumstances.

The Government intends to establish a holding company to run 10 26m project financed pole and line vessels. Share holders will consist of the State, private individuals from Cape Verde and parties from Angola (it is not known whether the Angolan interest is from the State or private sector). There are indications that part of the agreement with Angola will facilitate the vessels to fish in Angolan waters. 5 of the vessels have already been delivered.

Table 14 - Summary of economic benefits of agreements with foreign fleets

Country	Fishery	Fleet	Annual License Fees	Financial contribution	Other Benefits	Local Employment	Catch	Product Landed in CV
EU	Large Pelagics, tuna-like species	Up to : 18 Pole & Line 37 Seiners 62 surface longliners	400€/vessel 2,850€/vessel 2,100€/vessel	680,000€		121 crew	1,813t ^a	0
Japan	Tuna (Big eye)	14 (1999), surface longliners.	6.700€/vessel	-	Support to infrastructure development in fisheries sector	Unknown, but thought to be 0	291t (1999), 316t (2000)	0
Senegal	Large & small pelagics (outside 3 miles)	Unspecified	Local license fees 4-46€/vessel	-	Reciprocal arrangement for CV fleet in Senegal	Unknown, but thought to be 0	857t (Average 1997-99) ^b	0

Source: ^a EC 2002 ^b ICCAT data for Cape Verde Box (defined in A.5.2.3)

A.2.3 Fisheries Monitoring, control & surveillance

The large size of the Capeverdean EEZ makes it very hard to provide surveillance. Despite this, the government of Cape Verde is increasing its efforts in order to make available the minimum means to the national coastal guard needs to fulfil the job.

At present the National Coast Guard, a body incorporated into the National Army, is responsible for the surveillance of Cape Verdean EEZ. The Coast Guard have the following patrol vessels:

Table 15: Coastguard vessels available in 2004

Name	Crew	Meters	Max Speed	Commissioned
Espadarte	6	15.5	24 Knots	1993
Vigilante	17	52.0	18 Knots	1998
Smaco	9	26.8	18 Knots	1999
Táinha	9	26.8	18 Knots	1999

These vessels have been given to Cape Verde by the governments of Germany, USA and China. Only the vessel Vigilante has the capacity to navigate in all the EEZ waters.

The coast guard also has two aeroplanes, one German Dornier and one Brazilian Bandeirante. Problems with the maintenance, procurement of spare parts and number of crew members for these aeroplanes are experienced regularly. The Dornier is currently operational.

Surveillance missions usually target three goals: illegal fishing, drugs trafficking and illegal immigration. The missions always combine the vessel Vigilante (with a company of marines on board) and the Dornier aeroplane. The coast guard planned to undertake monthly patrol missions lasting 12 days. Due to the lack of financial support, during 2003 they made only two missions. Both of these missions were financed with revenue from the financial contribution the FA involving an amount around 50,000 Euros. The DGP and INDP sent one inspector in each of these two missions. There were no missions made in either 2002 or to date in 2004.

In the past the government has made available the coast guard aircraft for regional surveillance operations under project AFR/013 of the CSRP. However cooperation with the project was reported as short lived as Cape Verde felt that contributions to the project from other members of the commission (The Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal) were lacking and there were few benefits for Cape Verde.

With regard to observers, only two observers were placed aboard vessels during 2002. Although a training program was carried out in 2000 where 20 observers were trained, trainees were not civil servants or under any other contract to the government. This has resulted in difficulties in locating observers who are available when necessary, as they invariably have another job. The protocol indicates that part of the license fee for longline vessels shall be set aside for the implementation of an observer programme. The protocol is considered to make adequate provision for onboard observers and vessels call frequently and consistently into Cape Verde ports, but in spite of this there has been very limited implementation of an observer programme.

In 1999 an EEZ Surveillance Fund was created to finance maritime and air control and surveillance activities with the aim of preventing illegal activities and ensuring the safety of the maritime communities. Although the fund still has legal statutes, there are no corresponding regulations and the fund has never been operational.

Cape Verde has no satellite based VMS system for monitoring fishing activities of the industrial fleet, but the Commission has agreed to co-finance up to 75% (max 100,000€) of the cost of the implementation of a system based on existing satellites & transponders and a local operations room. It should be noted that this project is outside of the provisions of the current protocol.

A.3 DESCRIPTION OF THE MAIN ENVIRONMENTAL IMPACTS

The main direct and indirect environmental issues associated with fisheries activities in Cape Verde waters were examined. The key issues can be summarised as:

- Cumulative fishing pressure on highly migratory stocks
- The targeting of sharks by the surface long-line fishery
- The incidental catch of turtles by the surface long-line fishery

These three issues, together with others, are examined in more detail in the following section

A.3.1 Direct Interactions

Direct interactions are those where fishing activities directly affect both the population status and structure of the target species and non-target species.

A.3.1.1 Target Stock Sustainability

• Tuna and tuna-like resources

The evaluation of the stock status of tuna and tuna like species is complicated because of the migratory character of the different species. For this reason, the estimation of the stock status and potential is made at the level of the Atlantic Ocean. ICCAT is the international organisation (with headquarters in Madrid) responsible for collating catch information, commissioning research and estimating the stock status of tuna and tuna like species. ICCAT uses this information to formulate recommendations to governments in order to ensure a sustainable exploitation of the species concerned.

The main species of interest which are caught in targeted fisheries in the Cape Verde EEZ are the yellowfin, the skipjack, the and bigeye tunas, and swordfish. The following assessment of the stock status for these species is based upon a recent review²⁴ undertaken by FAO on the high seas stocks in the FAO 34 (CECAF) region (which includes sub-areas 3.1 and 3.2 of Cape Verde 'Coastal' and 'Insular' respectively) taking into account ICCAT data up to and including 2001.

Atlantic yellowfin tuna (Thunnus albacares)

Introduction: Yellowfin tuna is a wide-ranging species distributed mainly in the tropical and subtropical oceanic waters where they form large schools. The sizes exploited by commercial fisheries range from 30 cm to 170 cm FL (fin length). Juveniles form mixed schools with skipjack and juvenile bigeye and are mainly limited to surface waters, while larger fish are found in surface and sub-surface waters. The main spawning ground is the equatorial zone of the Gulf of Guinea, with spawning occurring from January to April. Juveniles are generally found in coastal waters off Africa. Research to date indicates a single stock for the entire Atlantic.

Catches and fishing effort: Yellowfin catches in the East Atlantic as a whole reached a historical high in 1990 (157,112 tonnes), but have since followed a generally declining trend, falling to 95,033 tonnes in 2000, but increasing significantly in 2001 to 115,911 tonnes (see Table 16). The overall relative contributions of the various gear types have remained similar since the mid-1980s. In the east Atlantic, purse seine catches have represented nearly 80% of the landings on average, with about 15% being taken by pole and line and about 5% by longline. Since 1991 purse seine fleets have developed a fishery that targets schools associated with artificial floating objects. FADS provides an important increase in catches of skipjack, juvenile bigeye and, to a lesser extent, increases in catches of juvenile yellowfin and by-catch, extending the fishing grounds westward to 30°W and south of the equator. The eastern tropical Atlantic purse seine nominal effort in terms of both number of boats and total carrying capacity has decreased over the last decade, with catches dropping from around 100,000 tonnes to just over 70,000 tonnes per annum in 2000, but rising again in 2001. This reflects different trends, with a relatively large decrease for the European and associated fleets (from 70 to 44 boats),

²⁴ Huntington, T.C. (2003): Review of Information on the Status of Fish Stocks and Fishing Activities in the High Sea Areas of the Eastern Central Atlantic Ocean. Internal Report to FAO Rome, May 2003. pp 57

partially compensated by an increase from 0 to 10 purse seiners for the Ghanaian fleet. The pole and line fishery remained stable for both European and associated fleets (15-20 boats) and Ghanaian (25-30 boats) fleets. Although the nominal effort has decreased, taking into account the potential changes in efficiency of these fleets due to changes in technology and fishing methodology, the effective effort is assumed to have remained relatively stable between 1999-2001, and purse seines still account for around 75% of all yellowfin catch.

Stock status: Fishing effort in 1999 was close to the maximum sustainable yield for the whole Atlantic of around 152,000 tonnes and in 2001 it was slightly above.

In 1993, the ICCAT recommended “that there be no increase in the level of effective fishing effort exerted on Atlantic yellowfin tuna, over the level observed in 1992”. Although the overall nominal effort has declined since the early 90’s, current estimates suggest that total effective effort has remained relatively stable or has only slightly declined since 1992. The estimate of MSY based upon the equilibrium models range from 144,600 to 147,300 MT; the point estimate of MSY based upon non-equilibrium model was 152,200 MT (current catches were 158,800 MT in 2001 and 137,400 MT in 2002). Yield-per-recruit analyses indicate that an increase in fishing effort is likely to decrease the yield per recruit, suggesting that stock is close to fully fished. The data also indicate that reductions in fishing mortality on fish less than 3.2Kg could result in substantial gains in yield per recruit. ICCAT have not implemented TAC for yellowfin.

An ICCAT assessment of the stock in 2000 indicated the parameters shown in Table 16:

Table 16 - Summary of ICCAT Stock assessment of yellowfin tuna in 2000

Current (2001) yield		157,000 mt
MSY		144,000-152,000 mt
Relative biomass	B1999/BMSY	103%
Relative Fishing Mortality	F99/FMSY	88-116%
ICCAT management recommendations in force		3.2Kg. Min. Size; fishing effort not to exceed 1992 level; closed areas/season for FAD's

Source: ICCAT

Since reported yellowfin landings appear to be somewhat above the MSY level estimated during the 2000 assessment, and fishing effort and fishing mortality may be in excess of the levels associated with MSY, ICCAT recommends that effective effort does not increase beyond the current level. A minimum size recommendation is in place (3.2kg).

Table 17: Yellowfin Tuna Catch in the East Atlantic Area (1992-2001)

		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Gear	Purse seine	99,532	92,129	90,152	87,598	89,156	78,364	77,668	77,582	72,081	88,105
	Baitboat	15,095	18,483	15,658	13,516	13,734	13,912	17,478	19,056	13,009	19,886
	Other surface	2,509	2,081	1,905	1,854	1,946	2,029	1,554	1,469	1,632	1,735
	Longline	3,903	4,107	8,503	7,955	8,567	5,964	8,036	7,675	8,311	6,185
	Sub-total	121,039	116,800	116,218	110,923	113,403	100,269	104,736	105,782	95,033	115,911
Country	Spain	49,902	40,403	40,612	38,278	34,879	24,550	31,337	19,947	24,681	30,937
	France	33,964	36,064	35,468	29,567	33,819	29,966	30,739	31,246	29,789	32,211
	Portugal	195	128	126	231	288	176	267	178	194	3
	Ghana	9,331	13,283	9,984	9,268	12,160	16,504	17,807	28,328	17,010	30,642
	Russian Fed.	1,862	2,160	1,503	2,936	2,696	4,275	4,931	4,359	737	-
	Taiwan	1,554	1,301	3,851	2,681	3,985	2,993	3,643	3,389	4,014	3,407
	Other	24,231	23,461	24,674	27,962	25,576	21,805	16,012	18,335	18,608	18,711
	Sub-total	121,039	116,800	116,218	110,923	113,403	100,269	104,736	105,782	95,033	115,911
TOTAL		121,039	116,800	116,218	110,923	113,403	100,269	104,736	105,782	95,033	115,911

Source: ICCAT (2002)

Skipjack tuna Katsuwonus pelamis

Introduction: Skipjack tuna is a wide-ranging species forming schools in the tropical and subtropical waters of the Atlantic, Indian and Pacific Oceans. They spawn opportunistically throughout the year in vast areas of the Atlantic Ocean. Skipjack growth is variable and seasonal, and substantial differences in growth rates have been reported between different areas. Skipjack is a species that is often associated with floating objects, both natural objects or diverse fish aggregating devices (FADs) that have been used extensively since the early 1990s by purse seiners and pole and line vessels (during the 1991 to 2001 period, about 36% of skipjack were caught with FADs).

The introduction of FADs has been implicated in the substantial change in schooling and migratory behaviour which has occurred, leading to a reduction in the number of free schools of mixed species. Skipjack caught with FADs are usually associated with small yellowfin (20%) and with small bigeye (17%) and also with other small tuna species. A comparison of size distributions of skipjack between periods prior to, and after, the introduction of FADs shows that, in the East Atlantic, there has been an increase in the proportion of small fish of this species in the catches, as well as a decline in the total catch in recent years in some areas.

Catches and Effort: Eastern Atlantic catches of skipjack by gear and country is shown in the following table for 1992-2001

Table 18: Skipjack Catches in the East Atlantic (1992 - 2001)

		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Gear	Purse seine	84,880	119,966	105,061	103,631	86,720	70,853	70,282	90,459	76,099	64,154
	Baitboat	35,660	31,699	37,876	33,709	31,936	38,356	41,451	41,325	30,547	44,437
	Other surface	1,449	1,028	311	308	323	138	930	288	1,162	1,252
	Longline	3	2	10	3	7	47	85	42	48	54
	Sub-total	121,992	152,695	143,258	137,651	118,986	109,394	112,748	132,114	107,856	109,897
Country	Spain	53,319	63,660	50,538	51,594	38,538	38,513	36,008	44,520	37,226	30,954
	France	21,890	33,735	32,779	25,188	23,107	17,023	18,382	20,344	181,183	16,593
	Portugal	7,477	5,651	7,528	4,996	8,297	4,399	4,544	1,810	1,302	2,167
	Ghana	18,967	20,225	21,528	18,607	19,602	27,667	34,150	43,460	29,950	43,340
	Russian Fed.	1,110	540	1,471	1,450	381	1,146	2,086	1,426	374	-
	Panama	8,719	13,027	12,978	14,853	5,855	1,300	572	1,308	2,287	-
	Other	10,510	15,857	16,436	20,963	23,206	19,346	17,006	19,246	144,466	16,843
	Sub-total	121,992	152,695	143,258	137,651	118,986	109,394	112,748	132,114	107,856	109,897
TOTAL		121,992	152,695	143,258	137,651	118,986	109,394	112,748	132,114	107,856	109,897

Source: ICCAT (2002)

Stocks: The traditional view is that there are two distinct management stocks, one in the East Atlantic and another in the West Atlantic, separated at 30°W, just to west of the Cape Verde EEZ. However the boundary of 30°W was established when the fisheries were coastal, whereas in recent years the CEEAF fisheries have extended towards the west, surpassing this longitude, and showing the presence of juvenile skipjack tuna along the Equator, to the west of 30°W, following the drift of the FADs. This would imply the possibility of a certain degree of mixing between East and Western stocks, possibly extending to the region of the Cape Verde EEZ.

Furthermore there is emerging evidence that skipjack stocks appear to be highly regionalised and relatively independent of each other. Resource management therefore should take into account a much greater local dynamic. In the ICCAT 2003 report the concept of "viscosity" (a low number of individuals moving between areas) is discussed and should be a factor to be taken into account when assessing skipjack stocks. A stock may be called viscous if there has been a decline in a localised segment of the stock due to over-fishing of that component however this appears to have little, if any, repercussion on the abundance of the whole stock in other areas, which would suggest that these fish prefer to stay in one area, possibly with one group of fish and do not migrate to other areas and join other existing stock.

Given that only a small proportion of the individual stocks appear to undergo large migrations, ICCAT goes on to suggest that smaller management units could be considered and in this context has identified that although there is a "possible scenario of local over-fishing in the Equatorial area of maximum fishing concentration on FAD's" ... "in others areas, particularly in the Senegalese area where there a predominance of

fishing on free schools, the trends of the indices showed a completely distinct stock situation (which) remains stable."

The last assessment on Atlantic skipjack was carried out by ICCAT in 1999. A two stage assessment is currently underway, with the first research cruise implemented in 2001, and the next one planned for 2004 (personal communication, Luis de Menezes, Director of Fisheries of São Tomé). The state of the Atlantic skipjack stocks show a series of characteristics that make it extremely difficult to assess. However some estimates have been made by ICCAT based on fisheries indices and a generalized production model. On an overall level, there are signs that catches are too high, although this may not be true for all the eastern stock. However there is a possible decline in the yield of the stock following the introduction of FADs and it could be considered that MSY estimates are too preliminary to be used as a measure of stock status. Uncertainties in the underlying assumptions for the analyses prevent definitive conclusions regarding the state of the stock. However, the results suggest that there may be over-exploitation within the FAD fishery, although it is not clear to what extent this applies to the entire stock. Based on this assumption, maintaining high concentrations of FADs would reduce the productivity of the overall stock. However, in the three years 1997, 1998 and 1999, implementation of a voluntary 'Protection Plan for Atlantic Tunas' agreed upon by the Spanish and French boat owners in the usual areas of fishing with objects, has resulted in a reduction in the skipjack catches associated with FADs. Maintaining this closure could have a positive effect on the resource.

In 1999, ICCAT made a recommendation to establish a closed area/season limiting the use of FAD's, between 1 November until 31 January of the following year, in the equatorial area defined by; Southern limit: 4° South; Northern 5° North; Western limit 20° West; Eastern limit African coast. This is well away from the CV EEZ. The objective of the recommendations (which is still operative) is to protect juvenile bigeye tuna, but it also impacts on others tuna. For a period Nov.1997-Jan. 1998 and Nov. 1998-Nov.1999 French and Spanish boats voluntarily applied the moratorium. The average skipjack catches by purse seine during Nov.1997-Jan. 1998 by was reduced by 68% compared to the average catches before the moratorium (ICCAT report 2002-2003).

Bigeye tuna Thunnus obesus

Introduction: The geographical distribution of bigeye tuna is very wide and covers almost the entire Atlantic Ocean between 50°N and 45°S. Spawning takes place in tropical waters when the environment is favourable. Young fish form schools mostly mixed with other tunas such as yellowfin and skipjack tunas. These schools are often associated with drifting objects, whale sharks and sea mounts. This association appears to decline as they grow larger. Circumstantial evidence, such as the time-area distribution of fish and movements of tagged fish, suggests an Atlantic-wide single stock for this species although ICCAT suggest that the possibility of other scenarios, such as north and south stocks, should not be disregarded.

Stocks: ICCAT have recently conducted a new stock assessment for this important tuna species (see ICCAT *Report on Bigeye Tuna Year Program Activities* SEC/2002/013 for further detailed information). The range of MSY estimates obtained from production models was 79,000-105,000 tonnes. Estimates obtained from other models ranged from 91,000 to 112,000 tonnes. The production model analyses estimated that the total catch was larger than the upper limit of MSY estimates for the years between 1993 and 1999 causing the stock to decline considerably, followed by a levelling off of the biomass in recent years as total catches decreased. These results also indicate that the current biomass (as of 2002) is about 10-20% below the biomass corresponding to MSY and that current fishing mortality is about 15% higher than the rate that would achieve MSY. ICCAT projections indicate that the biomass of the Atlantic stock will not decline further with constant catches of 100,000 tonnes, which is very close to the reported catch of 96,482 tonnes for 2001 (source: 2002 ICCAT Report). Increases in biomass are expected with catches of 95,000 tonnes or less, and further declines in biomass are expected with catches of 105,000 tonnes or more.

As with yellowfin tuna, ICCAT has recommended that a minimum size regulation of 3.2 kg be imposed on bigeye tuna. Many of the equatorial fisheries still catch small (i.e. <3.2 kg) fish, especially the equatorial pole and line and purse seine surface fleets, and fish of less than 3.2kg are believed to represent over 50% of the total catch. The ICCAT recommendation is for 15 % tolerance, in number of undersized fish per landing. ICCAT also recommended that catches in 2001 were limited to the average catch of 1991 and 1992 for the major fishing nations whose 1999 catch was larger than 2,100 tonnes. This catch limit applies to Spain,

France, Portugal, Japan, Ghana, the PR China and Taiwan – over 2001 their combined catch was 13,000 tonnes lower than the total catch limit of 86,500.

ICCAT have also raised concerns that fishing effort still remains too high and that a total TAC of 100,000 tonnes or less should be considered.

Table 19: Bigeye Tuna Catches in FAO Area 34 (1992-2000)

		1992	1993	1994	1995	1996	1997	1998	1999	2000
Gear	Purse seine	17,116	30,636	31,525	24,799	26,503	18,413	15,557	20,330	16,661
	Baitboat	13,462	12,215	17,937	20,545	17,080	16,461	16,847	19,820	10,297
	Other surface	214	278	685	317	389	185	157	253	209
	Longline	374	25,053	29,862	30,288	33,740	27,956	28,275	37,488	30,609
	Sub-total	31,166	68,182	80,009	75,949	77,712	63,015	60,836	77,891	57,776
Country	Spain	13,590	6,120	21,703	17,443	15,074	6,806	5,518	7,103	7,384
	France	6,430	12,478	11,863	8,317	8,563	5,791	5,235	5,462	5,610
	Portugal	-	-	63	-	-	-	-	-	-
	Ghana	2,866	3,577	4,493	5,517	5,804	7,430	13,252	11,460	5,586
	Taiwan	4,188	6,675	8,173	6,992	9,889	8,107	4,996	7,889	6,617
	Other	4,092	39,332	33,714	37,680	38,382	34,881	31,835	45,977	32,579
	Sub-total	31,166	68,182	80,009	75,949	77,712	63,015	60,836	77,891	57,776
TOTAL		31,166	68,182	80,009	75,949	77,712	63,015	60,836	77,891	57,776

Source: ICCAT CATDIS Database (2002)

Atlantic swordfish Xiphius gladius

Introduction: Swordfish are distributed widely in the Atlantic Ocean and Mediterranean Sea. ICCAT management units for assessment purposes are three separate Mediterranean, North and South Atlantic groups. These stock units are supported by recent genetic analyses. However, the precise boundaries between stocks are uncertain, and mixing is expected to be high in the boundary zones. Known spawning areas are located in the warm tropical and subtropical waters, where swordfish spawns throughout the year in different localized areas displaying a regular seasonal pattern. Swordfish are typically caught on pelagic longlines at night when they feed in surface waters. They are found in the colder northern waters during summer months and all year in the subtropical and tropical areas.

Fisheries: Directed longline fisheries from Spain have operated since the late 1950s or early 1960s. The primary opportunistic fisheries that take swordfish are fleets from Chinese Taipei, Japan, Korea and France. In recent years there has been a change in the longline gear used by many Spanish vessels including moving from traditional multifilament to monofilament lines. One concern of all such developments is the effect on the data continuity and therefore its interpretation.

Stock status: The current base case assessment (2002) indicates that the North Atlantic swordfish biomass has improved due to strong recruitment since 1997 (1996 year-class), combined with recent reductions in reported catch, especially compared to the peak catch values of 1987. The updated indices examined by ICCAT in 2002 confirmed that a positive effect of this strong recruitment is manifested in older ages and in the biomass indices of several fisheries. This has promoted improvement in spawning stock biomass and should result in further improvement if these year classes are not heavily harvested. An updated estimate of maximum sustainable yield from production model analyses is 14,340 tonnes. Since 1997 North Atlantic swordfish catches have been below 14,340 tonnes. Preliminary estimates (reported plus carried over) of catches in 2001 were about 9,800 tonnes, but this level is probably an underestimate due to IUU catches. For the North Atlantic swordfish stock, the assessment model showed that the biomass has increased from the 1997 low and the 2002 biomass is estimated to be near the level that would produce maximum sustainable yield due to strong recruitment and lower catches during this period. If total catch from 2003 and beyond, including discards and overages, was less than MSY, there would be a greater than 50% chance that the population would reach BMSY within the recovery program plan time-frame agreed by ICCAT.

- **Small Pelagic stocks**

The small pelagic fishery exploits three species of scad *Decapterus macarellus*, *Decapterus punctatus* and *Selar crumenophthalmus*). Fishing is by small purse seine or ring nets. The fish are traditionally used for live bait in the tuna fishery, and for direct human consumption on the local market. In recent years a new market has developed, the sale at sea to South Korean and Japanese processing vessels frequently present in the Capeverdean EEZ. This *klondyking* system developed strongly during the nineties and contributed to a significant increase in fishing effort. An additional 20 small purse seines vessels entered the fishery in late 1990s.

The migratory behaviour of these small pelagic fishes is not well known, although scientists are of the general opinion that they do not migrate further than the West African region (Almada E, 1997). The estimation of the biomass of small pelagics was first made in 1982 by the Norwegian research vessel “Fridjof Nansen” followed by a later study by Diouf in 1992.

The results of this evaluation are presented in Table 44 and indicate that the small pelagic fishery could sustain an annual yield in the region of 7,300 to 9,300 tonnes, of which about two thirds (5,000 tonnes) could be the mackerel scad *Decapterus macarellus*. (Almada E, 1997). Catches of all species are in the region of 3,000 to 4,000 tonnes (3,585 tonnes in 2001) suggesting that there is a considerable unexploited potential in this fishery of some 4,500 to 6,500 tonnes per year. Although these results show a more favourable stock situation than an earlier study (Moniz & Caramelo 1996) which suggested that stocks are probably fully exploited, the prevailing view of the INDP is that the Almada study (1997) is the most scientifically reliable.

- **Demersal Fish stocks**

There is a great variety of demersal fish in the Capeverdean EEZ, which are exploited mainly by artisanal fishermen using hook and line. The use of this fishing gear is due to the inaccessibility of other gears, namely trawlers, because of the morphology of the bottom which is mostly rock.

In spite of this, there is an area near Boavista Island which forms a platform at about 200 metres in depth, where the national research vessel has undertaken a number of trawl surveys in 1995, 1996 and 1997 with the aim of estimating the stock of some of the commercial demersal species. The annual sustainable yield in this region is estimated to be between 3,000 and 6,500 tonnes²⁵ compared to a total Capeverdean catch of 1124 tonnes in 2001. Preliminary analysis by INDP of the catch per unit effort suggests that there has been little change over recent years, being about 6kg fish /fisherman/day. Given the relatively low catch, it would appear that many of the species with commercial potential are still under-exploited in this and other areas.

It is also thought likely that there are commercial species of deepwater demersal fish stocks that are not being exploited, for example, the black scabbard fish *Aphanopus carbo*, which is thought to offer fishing opportunities. No data is available considering this resource.

- **Crustacean stocks**

The coastal lobsters fishery catch targets the green lobster (*Panulirus regius*), brown lobster (*Panulirus echinatus*) and the slipper lobster (*Scyllarides latus*); this fishing is carried out by divers, usually without any specific training. The island of Sal is the centre of this fishery due its transport connections and tourist industry. No substantive scientific evaluation of these stocks has been conducted. However anecdotal evidence suggests that lobster stocks in the greater part of the archipelago are in better condition especially in the islands of Sal, Boavista and Maio.

The pink lobster (*Palinurus charlestoni*) is caught beyond a depth of 100 meters by the national industrial fishing fleet. All the catch from this fishery is usually directed to the European markets. As far as this species is

²⁵ Diouf, T. 1992 – Etudes des ressources halieutiques et de leur niveau d’exploitation du Cap Vert. Restructuration de la Pêche Industrielle au Cap Vert. Rapport final. Tome 2 Annexe II. SEPIA International.

concerned, in 1992 the catch was 106 tonnes, in 1996 this had been reduced to an estimated catch of between 30 and 40 tonnes. Two independent evaluations have been carried out. One biological study estimated that the annual sustainable production potential was between 100 to 150 tonnes (MSY), the other (a bio-economical study) estimated between 50 and 75 tonnes (MSE). Historic production levels were therefore, respectively at or above MSY. However after the export ban, which effectively stopped the exploitation of this resource for 3 years, the stocks are considered to have substantially recovered.

- **Sharks**

Longline fisheries in the tropical Atlantic are also associated with target catches of blue shark (*Prionace glauca*), mako shark (*Isurus oxyrinchus*), a by catch of silky shark (*Carcharinus falciformis*) and the great white shark (*Carcharodon carcharias*). As with most sharks these species are viviparous, with low fecundity, and thus highly vulnerable to over-fishing. Sharks often have a close stock-recruitment relationship, long recovery times in response to over-fishing and complex spatial distribution. Conservation and management of sharks are impaired by the lack of accurate data on catch, effort, discards, and trade data, as well as limited information on the biological parameters of many species and their identification.

Table 20 - Main shark species caught in surface longline

Spanish Common name	English Common name	Species
Pez martillo / Tubarão	Hammerhead shark	<i>Sphyrna spp.</i>
Marrajo ¹	Mako Shark	<i>Isurus oxyrinchus</i> <i>Isurus paucus</i>
Quella	Blue Shark	<i>Prionace glauca</i>
Jaqueton	Silky shark Great white shark	<i>Carcharinus falciformis</i> <i>Carcharodon carcharias</i>

¹May also be the Porbeagle shark, *Lamna nasus*

Fisheries: EU surface longliners pursue fishing methods which specifically target swordfish, and the mako and blue sharks. Of these the last two represent a substantial component of the landed catch of the surface longline segment, comprising some 75-85% of the catch weight and about 55-60% of the catch value²⁶. High value fins and livers (as a source of oil and squalene) are the main sources of revenue. Shark should therefore be regarded as a target species in these surface longline fisheries, including in that of Cape Verde.

Table 21: Catch composition of Spanish Longliner Fleet, Cape Verde EEZ 2002

Common name	Species	Catch (tonnes)	%
Hammerhead sharks	<i>Sphyrna spp.</i>	25	2
Great white Shark	<i>Carcharodon carcharias</i>	10	1
Mako Shark ¹	<i>Isurus oxyrinchus</i> <i>Isurus paucus</i>	121	8
Blue Shark	<i>Prionace glauca</i>	855	56
Tuna	<i>Thunnus spp.</i>	13	1
Marlin	<i>Tetrapturus spp.</i>	2	0
Swordfish	<i>Xiphias gladius</i>	151	10
Sailfish	<i>Istiophorus albicans</i>	118	8
Others (assumed mainly sharks)		234	15
Total		1,529	100

Source: DG Fish (Declared catch records, Spanish Longliner fleet in Cape Verde EEZ)

¹ Could also refer to porbeagle (*Lamna nasus*) since the Spanish “marrajo” may refer to both species

²⁶ based on catch reports of Spanish longliners fishing in the Cape Verde EEZ in 2002/2003.

Catches: Increase in effort and yield of shark catches has led to concern over the consequences for the populations of some shark species in several areas of the world's oceans. Sharks are caught by a number of fleets from diverse countries, yet little has been done to assess the impact of this potentially large removal of individuals from the population.

The main species of concern are the blue shark and short-fin mako shark. There is some data on by-catch of these, principally by the Spanish surface long-line fleet provided to ICCAT. ICCAT Document SCRS/01/049 provides preliminary scientific estimates of shark catches of the Spanish surface longline fleet targeting these species and North Atlantic swordfish in 1999.

The document reports that, in terms of weight, all landed catch of shark accounted for 74% of the total landings of the fleet in the Atlantic, of which 95.4% was composed of large pelagic sharks. The Portuguese longline catches indicates a catch ratio of 2.92 blue sharks to 1 swordfish and 0.406 short fin mako to 1 swordfish in the North Atlantic. The Japanese fleet does not report shark catches, or include them in "Others" (3% of total catch). It is likely that suitable species are "finned" and the lower value remains discarded. Reported catches of EU-Spain longliner fleet for 2002 in Cape Verde EEZ, shows that more than 67% of the catch in the swordfish fishery is shark, of which 56% is Blue Shark (Table 21). There is no data on landing or utilisation, but Spain does register exports of shark by products.

Data from observer programmes on long line vessels in the ICCAT area also provides some information, but this is not collated in a readily accessible form.

Stock assessment: There is only limited data made available on landings and discards of blue and mako sharks, and no data made available on associated effort. The landing data available were submitted by some countries to ICCAT and only covered the period 1986-2000. There are no catch-at-age or catch at size data available. Consequently, there is at present insufficient data to perform quantitative fisheries stock assessment for this specie, even the simpler surplus production approaches.

Extensive tagging data from NMFS of USA²⁷ and the CFB of Ireland²⁸ shows that there is a single stock of blue shark in the North Atlantic. Meanwhile recent literature sources have compiled and analysed some CPUE data sets for the North West Atlantic that show a considerable decline in blue shark abundance indices. Simpfendorfer et al²⁹, showed that males have declined approximately 80% between the middle-1980 and the early 1990s. Baum et al. (2003) presented an analysis of logbooks data for US pelagic longline vessels targeting swordfish and tuna in the North West Atlantic, where blue shark abundance index showed a 60% decline during the period analysed (1986-2000) and suggest density-dependent habitat selection.

The great white shark figures on the IUCN red list as vulnerable and is an Appendix III Species for Australian waters. It is expected that a better assessment of its status would lead to its classification as endangered and the great white shark is currently proposed for addition to CITES Appendix II. No other shark species in this region are covered by CITES Appendices.

Management recommendations: ICCAT, through the Standing Committee on Research & Statistics (SCRS) is conducting an assessment in 2004 of Atlantic pelagic sharks focusing on blue and shortfin mako shark. In the ICCAT Data Preparatory Meeting for Atlantic Shark Stock Assessment³⁰ ICCAT Contracting Parties (inc. Cape Verde and the EU) were encouraged to submit species-specific shark catch statistics including estimation of shark catch, dead discards and size data with an emphasis on porbeagle, blue and short-fin mako sharks. It recommended that ICCAT Contracting Parties develop and conduct observer programs for their own fleets to collect accurate data on shark catches by species (including discards). It also recommended that Contracting Parties encourage release of live sharks, minimise discards by requiring retention on board of sharks from which fins are removed and develop and conduct observer programs for their own fleets to collect accurate data on shark catches by species (including discards). Importantly the document also called for no increase in targeted fishing for porbeagle, blue and short-fin mako sharks. Following this EC Regulation 2002/0186

²⁷ Koher et.al.1998

²⁸ Fitzmaurice et al., see ICES CM 2003/G:09 Report of Working Group on Elasmobranchs

²⁹ ICES CM 2003 (G:09 Report of Working Group on Elasmobranchs)

³⁰ Halifax, Canada, September 11-14, 2001

(Proposal for a Council Regulation amending Regulation (EC) No 1936/2001 of 27 September 2001 laying down control measures applicable to fishing for certain stocks of highly migratory fish) specifically requires that “Member States shall transmit to the ICCAT Executive Secretariat in electronic form for scientific purposes, data on catches and effort as defined by ICCAT. In particular estimates of discards of dead porbeagle, shortfin mako and blue sharks.” However these are all target species and discards are likely to be nil, so technical regulations setting detailed implementation procedures have not been introduced.

The EU has also moved to protect sharks from excessive exploitation through the practice of “finning”. Council Regulation (EC) No 1185/2003 of 26 June 2003 on the removal of fins of sharks on board vessels. The Regulation prohibits the removal of shark fins on board EU vessels and vessels fishing in Community waters. Finning may however be permitted on specially licensed vessels where they have demonstrated a capacity to utilise the entire shark, on condition that all parts of the fish are landed and full records of catch weights are kept.

FAO has implemented the International Plan of Action on Conservation and Management of Sharks, and encouraged member nations to submit and update National Plans of Action on Sharks. IPOA-SHARKS is voluntary, and has been developed within the framework of the Code of Conduct for Responsible Fisheries as envisaged by Article 2 (d) and the Precautionary Approach. In September 2001, Cape Verde, together with Gambia, Guinea, Guinea Bissau, Mauritania, São Tomé and Príncipe and Senegal, formulated a Sub-regional Plan of Action for sharks³¹. In the 12th Meeting of the Conference of the Parties of CITES (held in Santiago-Chile 3-15 Nov. 2002) it was agreed that “that a lack of progress in the development of the FAO IPOA-Sharks is not a legitimate justification for a lack of further substantive action on shark trade issues within the CITES forum, the CITES Secretariat were instructed to raise with FAO concerns regarding the significant lack of progress in implementing the IPOA-Sharks and to urge FAO to take steps to actively encourage relevant States to develop NPOA-Sharks, and to urge FAO COFI and Regional Fisheries Management Organizations to “take steps to undertake the research, training, data collection, data analysis and shark management plan development outlined by FAO as necessary to implement the IPOA-Sharks”.

Shark catches by EU vessels should be declared on the appropriate catch declaration records submitted to ICCAT. However the standard reporting forms as presented in the Annex to the Protocol, do not specifically list shark, and only have a single column for declaration of “Others specific species”. In the absence of specific instructions it appears that many fishers do not declare shark catch, or if they do, they are only declared generically. There is concern that the catch of sharks is therefore not being correctly declared in line with the ICCAT recommendations. ICCAT has recently revised (in 2003) standard reporting forms to specifically address this point, and new reporting requirements should be specified in any new FPA.

A.3.1.2 Non-Target Catch Issues

- **Turtle by-catch**

The consultants have identified the turtle by catch in surface longline fisheries as an important environmental issues associated with fishing in Cape Verde waters. This is considered in more detail in the following sections.

The main species of sea turtles found in the West Central Atlantic Ocean and suffering from a potential interaction with industrial commercial fisheries are as follows:

³¹ IUCN 2002. Report on Implementation of the International Plan of Action for Sharks (IPOA – Sharks): paper submitted for discussion at the 18th. CITES Animals Committee meeting, Costa Rica, 8-12 April, 2002. IUCN Species Survival Commissions Shark Specialist Group (SSG) and TRAFFIC

Table 22: Principal Turtle Species and Resource Status

Species	Distribution	Resource Status
Leatherback Turtle (<i>Dermochelys coriacea</i>)	70°N to 50°S	Critically Endangered/ ^a
Hawksbill Turtle (<i>Eretmochelys imbricata</i>)	40°N to 40°S	Critically Endangered
Atlantic Green Turtle (<i>Chelonia mydas</i>)	40°N to 35°S	Endangered/ ^b
Loggerhead Turtle (<i>Caretta caretta</i>)	Equatorial coastal waters	Endangered
Olive ridley (<i>Lepidochelys olivacea</i>)	20°N to 30°S	Endangered

^{/a} Critically Endangered: facing an extremely high risk of extinction in the wild, as defined by reduction of at least 80% over the last 10 years (or three generations).

^{/b} Endangered: not Critically Endangered but is facing a very high risk of extinction in the wild, as defined by reduction of at least 50% over the last 10 years (or three generations).

Source: (2003 IUCN Red List of Threatened Species) by the International Union for the Conservation of Nature and Natural Resources.

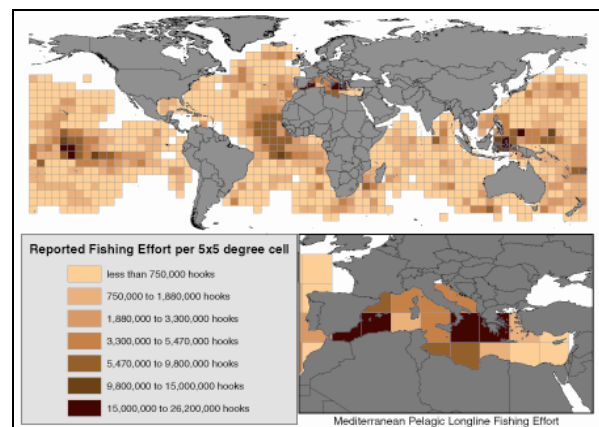
Turtle by catch in surface longline fisheries

Although in some parts of the world, turtles are still hunted, both for food and for their shells, the most serious marine environment threat to turtles is commercial fishing, through incidental capture in a range of fishing gears, including demersal trawls, gill nets and longlines. Typically turtles become trapped in the fishing gear and drown or get mauled by sharks.

A number of studies have implicated pelagic longline fishing in turtle mortality and have attempted to measure by catch rates. Ferreira *et al* (2001) measured an average by catch rate of 0.27 turtles/1000 hooks in the Azorean surface longline fishery (with seasonal rates up to three time greater than this). Pinedo and Polacheck (2003) showed by catch rates averaging 1.48 turtles/1000 hooks in the Brazilian EEZ (34% of sets had at least one turtle by catch). A Mediterranean study by Carreras *et al* (2003) showed that surface longliners caught on average 4.7 loggerhead turtles per month. Lewison *et al* (2004) assessed global turtle by catch rates derived from observer programmes applied in the fleets of 13 countries, including those fishing in the Gulf of Guinea and Azores in the Atlantic, and determined a global average by catch rate of 0.17/1000 hooks for loggerhead turtles and 0.03/1000 hooks for leatherbacks. They showed that by catch rates were higher in the Atlantic and Mediterranean than in the Pacific basin. Turtle by catch rates in the Pacific were shown by Crowder and Myers (2001) to be higher in longline fisheries targeting swordfish (thought to be due the shallower set and use of light sticks).

Four primary hotspots of pelagic longline effort emerge, evident in Figure 1. In the African regions this includes the central southern Atlantic Ocean (with high reported fishing effort between latitude approximately 20°N and 10°S and of around 10° to 25° longitude west, comprising the EEZ of Cape Verde and surroundings, the EEZ of Mauritania, Senegal, Sierra Leone and Liberia and circling the areas of Guiné-Bissau and Guinea Conakri.

There is therefore emerging evidence that surface longlining results in significant mortality of leatherback and loggerhead turtles in the Atlantic fisheries, and that shallow set longlines might be more damaging in this respect. Whilst there is no specific data on by catch of turtles in the CV EEZ fishery, there is clear evidence of this interaction in similar fisheries in adjacent waters.

Figure 1: Estimated global distribution of longline fishing effort (2000)

Source Lewison, RL *et al*, "Quantifying the effects of fisheries on threatened species: the impact of pelagic longlines on loggerhead and leatherback turtles, Ecology Letters 2004 7:221-231

Stock status

It is important to note that data available and existence of in depth studies of turtle population in the Atlantic African coast are scarce and not so well known as in the Pacific region, as has been noted to the consultants by ECOFAC³² and other organisations.

However, all 5 of the above species of turtle are listed by IUCN on the Red List of Endangered Species. leatherback and hawksbill turtles are regarded as critically endangered (Table 22).

Conservation and management measures

Within the African regions, the Abidjan Turtle Conservation Convention was established in 1999 through a Memorandum of Understanding under the Convention on the Conservation of Migratory Species of Wild Animals, to which Cape Verde is signatory. A regional conservation plan for sea turtles has been established which should apply to all the countries ranging from the Straits of Gibraltar to the Cape of Good-Hope. Under the Convention each country should present measures for the conservation and protection of turtles at all stages of their life cycle. Implementation within the African region is known to be weak.

Experimental work has identified some gear modifications and fishing practices that reduce sea turtle by catch on longlines (e.g. circle hooks, mackerel bait, leaded swivels; Watson *et al.* 2003 in Lewinson, 2004). However more practical work and multinational efforts required before mitigation measures can be implemented.

In the meanwhile the serious risk of extinction for some populations of sea turtles warrants the application of the precautionary principle as applied to endangered species management. This suggests that steps should be taken to reduce mortality for sea turtles, both on land and at sea.

- **Incidental catch of seabirds**

Very little is known about incidental mortality of seabirds currently caused by pelagic longlining in the Atlantic Ocean and Mediterranean Sea. ICCAT has established a Sub-Committee on By-Catch and a Shark Working Group but apparently does not collect data on mortality of seabirds. Longline fishing is a major threat to 22 species of seabirds that are currently listed as globally 'threatened' according to IUCN criteria (BirdLife International 2000). These species includes 17 species of Albatrosses, one Giant Petrel, and four Petrels (all of the genus Procellaria). Most species (19) occur in the Southern Hemisphere, mostly south of 30°S. Two threatened species occur in the North Pacific Ocean, and one species is confined to the tropical Pacific Ocean. The 22 globally threatened seabirds for which longline fishing is a major threat, breed on territories in extreme southern latitudes. These seabirds have been recorded as incidental mortality in 28 fisheries from 14 different nations, but not including any fisheries in the Cape Verde region or neighbouring countries. The impacts of surface longliners on the sustainability of seabird populations is not considered to be significant in the Cape Verde region.

- **Incidental catch of marine mammals**

By-catches of marine mammals can be relatively frequent in purse-seine fisheries targeting skipjack and yellowfin. For example, ICCAT quotes that in 2001, 2,075 marine mammals were caught (along with 137 sea turtles and 35,123 sharks and rays) in purse seine gear in the Eastern Pacific Ocean. However, in contrast to the Pacific, the western side of the Atlantic Ocean, there is little literature regarding cetacean by-catch in the Eastern Central Tropical Ocean. However incidence is thought to be less. For this reason ICCAT does not publish quantitative estimates of mammal by catch and the consultants are not aware of any studies in this region.

³² Ecosystèmes Forestiers d'Afrique Centrale. This organisation is funded by EDF and is promoting the creation and management of protected areas that act as sanctuaries of biodiversity in Central Africa. Website <http://www.ecofac.org>

A.3.2 Indirect Interactions

A.3.2.1 Non-target Species

Removal of top predators: It has been suggested that the removal of predatory fish such as sharks and tunas may result in an increase in the numbers of unfished prey species, thus allowing fishers to harvest more. Predation is recognised as a key structuring process in aquatic ecosystems but empirical evidence suggests it is wrong to assume most predator-prey relationships are tightly coupled. Many simplistic models of predator-prey interactions fail to recognise other factors, such as prey switching, ontogenetic shifts in diet, cannibalism and the diversity of species in marine ecosystems. In tropical coral reef systems, where the species diversity is relatively high and there are large numbers of keystone species, the removal of piscivorous target species does not seem to result in a corresponding increase in the abundance of their prey (Jennings *et al*, 1995 and Jennings and Polunin, 1997). However the removal of a wide range of these species (i.e. both sharks and tunas within a relatively limited geographical area) may have significant, but unknown consequences.

Seabirds: although there is very little data on the subject, there is some evidence that high levels of fishing pressure on top predators such as tunas and sharks may lead to a proliferation of small pelagic species. As noted by Dunn (1995)³³ such an imbalance may not be beneficial to surface feeding seabirds (notably terns and shearwaters).

A.4 STAKEHOLDERS

A.4.1 Description

The main stakeholders in the fisheries sector in Cape Verde are:

1. Subsistence fisheries located in small remote fishing communities;
2. Small scale artisanal fisheries using vessels of up to 8m in length, landing in ports with some kind of distribution system;
3. A semi-industrial fishery using vessels of between 8 to 20 meters;
4. An industrial fishery using vessels of 20 to 30 meters in length.
5. A tuna processing industry (mainly canneries);
6. A corps of women fish vendors;

Table 23 - Main Stakeholders

	<i>Subsistence and Artisanal Fishery</i>	<i>Semi-Industrial and Industrial Fishery</i> ^{/a}	<i>Fish Industrial Fishery (excl EC FA fleet)</i> ^{/a}	<i>EC FA Fleet</i>
Production (Tonnes)	5,762/ ^a	3,241/ ^a		1,813/ ^c
Cape Verde Fishers directly employed/ ^b	4,283/ ^b	996/ ^b		200/ ^d
Foreign fishers directly employed	0			1,297/ ^f
Indirect employment (National)	3,666/ ^e			0

^{/a} INDP, 2001

^{/b} INDP, 2000

^{/c} Catch declarations (EU Commission), 2002

^{/d} Navigational Agencies (Limage, Globe, Agência Nacional de Viagens) 2003

^{/e} Incl employment in fish processing industry, cold storage and women fish vendors. Excl employment in artisanal vessel construction and repairs (no data) and industrial vessel construction and repairs (activity is not exclusively targeting fishing vessels)

^{/f} estimated from average crew per type of fishing vessel

³³ Dunn, E (1995). Global Impact of Fisheries on Seabirds. A paper prepared by Birdlife International for the London Workshop on Environmental Science, Comprehensiveness and Consistency in Global Decisions on Ocean Issues. RSPB, Sandy Lodge, UK pp27

A.4.1.1 Artisanal Fishery

Artisanal Fisheries represents an important source of employment being in some islands one of the principal productive activities. This sector comprises full time fishers and part-time fishermen coming from inland activities. In 1999, the last year with a complete survey, the sector employed 4,283 fishers (3,899 in full-time and 384 in part-time). This sector is the main supply of fish for the domestic market and is very dependent on tuna resources.

The artisanal fisheries are characterized by multipurpose fisheries targeting different group of species during the year, according to seasonality and catch trends. Fishing activities involve tuna species, lobsters, demersals and small pelagics, it is very common for fishermen to target all the different groups through the year. The sector comprises about 64% of the annual catch of the national fleet with tuna representing an important share. In fact the sector exhibits a high rate of exploitation of big tuna species with about 40% of the artisanal catch being only tuna species having yellowfin as one of the major targets (standing for around 20%) as shown in the Table 32.

The artisanal fleet is comprised of small-scale vessels, open-deck with lengths between 3.5 and 8m and 1.5 to 2.5m wide, with or without outboard motor (5 to 25hp) used in conjunction with oars or sails. The average crew is 3 fishermen. These vessels are built by local naval carpenters, and do not have safety or navigational equipment, being of a very basic capacity, although they are used to go fishing from one island to the other. Navigation attributes and technology are very limited, with cases of small-scale vessels being lost at sea appearing near Brazil.

In 1999 (last year of complete survey) the fleet was composed of 1,267 open-deck vessels, of which 929 (73%) had outboard engines. The rather high level of motorization was mainly attained in 1994 and remained fairly constant until 1999. The open-deck vessels use the following gear:

- hand line, targeting tuna species, demersals and medium /small pelagics;
- seine nets, gillnets and beachseines for medium/small pelagics;
- diving for lobsters and cephalopods;

Handline fishing is the most common fishing method amongst these vessels, contributing towards about 70% of total artisanal fisheries in 2001, catching tuna species, demersals and medium pelagics.

A.4.1.2 Semi-Industrial and Industrial (national fleet)

The industrial and semi-industrial fleet is based mainly in the islands of S.Vicente and Santiago and is less important than the artisanal sector in numbers employed, and in total catches. The information relating to this sector is however rather weak, with catch data and fleet characteristics not totally accounted. The industrial and semi-industrial fleet is in general noted for its under-capitalisation and subsidy dependent ownership.

Table 24 - Cape Verde Semi-Industrial and Industrial Fleet

Annual Catch	3,241 tonnes	INDP 2001
Direct employment	996	INDP 2000
N° Vessels	69	INDP
of which: LOA 20-30m	8	
LOA 15-19.9m	4	
LOA <15m	31	
without data	26	

Source: INDP

The fleet is composed of old vessels, many of which coming from Europe, although the state and operability of the vessels is dependent on the ability of operators to invest in maintenance.

During the nineties there were new entrances in the fleet of around 20 fiberglass vessels of 11m length and 16 of about 8m. More recently, these have been joined by 5, out of an expected final total of 10, new pole and line vessels of about 26m length without freezing equipment. The vessels have mechanical problems to be solved and all 10 are expected to be managed by a new State joint venture holding company.

The fleet operates with different fishing gears, according to the season, targeting tuna species, lobsters and small pelagics. In the last two years the share of industrial and semi-industrial fleet represents about 36% of total national catch (2001), with tuna species (mainly skipjack) having within the sector a share of around 45% to 40%.

The operation of the tuna pole & line vessels is usually complemented with small periods of lobster fishing, while lobster vessels also dedicate time to catch large tuna fish (mainly yellowfin) and demersals. Purse-seiners, also complement their activity according to catch trends of demersals, large tunas and lobsters.

Tuna catch of the industrial and semi-industrial fleet is partially utilized by the national processing industry, although this is not quantified in the statistics.

A.4.1.3 Industrial (EC fleet)

The EC industrial fleet licensed to fish under the current protocol with GoCV has comprised an average of 90 vessels, of which 17% are pole and line vessels, 23% purse-seiners all targeting tuna species, and 60% surface longliners targeting swordfish and similar fish with a considerable catch of sharks (Table 25). The fleets' origins being mainly from Spain (tuna purse-seiners from Bermeo - País Vasco; and, longliners from Vigo) and France (Councernaueu) with a small group from North-Centre of Portugal. Over the last 3 years of activity the fleet has reduced presence in number of vessels mainly due to the decrease in the utilisation of surface longline possibilities.

Table 25: European fleet licensed under current protocol

Fleet	2001/2002	2002/2003	2003/2004	2003/2004		
				France	Portugal	Spain
Pole and line	12	17	16	5	0	11
Tuna Purse seiner	20	21	21	9	0	12
Surface longliner	60	59	44	0	4	40
Bottom Longliner	1	0	0			
Total	93	97	81	14	4	63

Source: EC

The French and Spanish pole and line fleet comprises vessels between 25 and 40m length with an average 195 GRT. Purseseiners have between 40 and 78m length with an average 1,003 GRT. Surface longliners present a length of between 18 and 32m with average 123 GRT.

A.4.1.4 Industrial (non-EC Foreign Fleet)

The industrial non-EC Foreign Fleet is comprised in 2004 by only one licensed longline vessel of Japanese flag, although there are usually about 7-9 Japanese longliners per year operating with average 58m length 440 GRT, according to a fisheries agreement between a Fleet Association of Japan and Cape Verde. More information was not given in reference to the fleet features. Total catch of this fleet has been around annual 300t.

Table 26: Catch from Japanese fleet

	1997	1998	1999	2000
Total Catch (MT)	366	86	291	316

Source: DGP (CV)

It is also normal for Senegalese tuna vessels to fish in Cape Verde EEZ, on the basis of the fisheries agreement between both countries, but there are no information on catch declarations to GoCV, the number of vessels entering the fishing zone, licenses and monitoring data. ICCAT data however indicates catches of skipjack for Senegalese vessels in the Cape Verde EEZ Box (see A.5.2.3 for definition):

Table 27: Catch from Senegalese fleet

	1997	1998	1999
Total Catch (MT)	455	1,963	152

Source: ICCAT

A.4.1.5 National Processing Sector

In the late 1990s there were also several individuals involved in exports. In total, companies and individuals exporting, were around 15 and 12 respectively, in 1998 and 1999. However the processing sector underwent a major constraint when Cape Verde was banned from exporting to the EU in February 2000, regaining access only at the end of 2003. As a result the sector is now comprised of a reduced number of companies. There are only three export establishments approved for the EU market:

- Frescomar SA (cannery for tuna and small pelagics) located in the island of S. Vicente
- La Tradicional (cannery for tuna and small pelagics) located in the island of S. Vicente;
- Salsesimbra (live lobster and fresh fish) located in the island of Sal.

The present important constraint for the canning sector is the reduced tuna supply due to reduced catches of the domestic fleet, non-existent supplies from the EU fleet and also of limited approved cold storage capacity to support the activity. Cold storage is presumed to be about 300t capacity (150t belonging to one of the canneries and the other 150t to a fishing port infrastructure in S.Vicente). In respect to transport for the export market, the island of Sal has, until now, had the only existing international airport and in respect to reefer transport the islands of S. Vicente and Santiago have frequent traffic availability.

There are only 3 Canning factories. One is located in S.Vicente – Frescomar – and has an approval number for exporting to the EU. This factory was recently built, in 2000, and has been exporting to USA and is also supplying the domestic market. The company has a workforce between 60 to 70 people. Raw material supplies of fish are one of the major constraints of the operation. In 2003 total raw material utilisation was about 700t (300t tuna and around 400t small pelagics based on a seasonal availability of the tuna resource from June to October). During 2003 the company requested tuna supply from the EC fleet in reference to the conditions of the FPA³⁴, without success and was obliged to import 30t of tuna. In 2004 imports are already over 80t and it is expected to undertake more consignments. In complement to the processing activity the company has a 27m length pole and line vessel for direct supplies for the factory.

The other two tuna and small pelagic canneries are inactive, although one (La Tradicional – Spanish and C. Verdean partnership, located in S. Vicente) has gained an EU export approval number very recently and is expected to start working in the present tuna season. The other, SUCLA, located in S. Nicolau, is still undergoing refurbishment operations in order to fulfil sanitary requirements for exporting to the EU. La Tradicional is expected to work with average 20 workers going up to 45 during the seasonal peak and SUCLA can operate with around 100 employees. In addition there is also a plan for building a new cannery in the island of Sal.

Salsesimbra, located in the island of Sal is dedicated to production and exports of live and frozen lobster, fresh and frozen fish, filleting of fish and also processing of shark. The location of the company is crucial for there activity. It is located in the main fishing areas for lobster (islands of Sal, Maio and Boavista) and has the only international airport nearby. The company operates with a small workforce of around 10-15 people.

A.4.1.6 Professional Organisations

Cape Verde is extremely weak in professional organisations with only one existing association of industrial vessel owners. This association comprises of 47 associate owners of semi-industrial and industrial fishing vessels, 85% from S. Vicente where the association is located. Participation is weak mobilisation only occurring when problems are very big. In respect to their relations with institutional authorities their voice is sometimes heard, although they claim that in relation to fisheries agreements they never were consulted.

The processing industry, artisanal fishers, fish vendors have no type of similar structure. Also no fishermen's union exists for support of fishers. Amongst the fishing communities there is a leadership relationship but without any cooperative type of organisation.

³⁴ Article 5 of the Annex to the current protocol states: "Community tuna vessels shall, wherever possible, contribute towards supplying the Cape Verde tuna canning factories in accordance with their fishing effort in the zone on the basis of current prices on the international markets. Payment shall be made in convertible currency."

A.4.1.7 National Exports

Exports of prepared, preserved and canned fish show that before 2000 there was reasonable activity by the canning industry with around 240t of product being exported in 1999 and about 380t in 1997. In addition the national market also absorbs a reasonable part of the output of the industry, which is good for the canneries, although the amount is not quantified.

Table 28: Worldwide Fish Exports from Cape Verde from 1997 to 2003

	1997	1998	1999	2000	2001	2002	2003
	(MT)						
Prepared, preserved or canned Fish	372	284	237	61	167	35	13
Fresh and Frozen Fish	2,743	2,164	999	271	57	201	12
Lobsters				12	10	23	17
Total	3,115	2,448	1,236	344	234	259	42

Source: INE

In the fresh and frozen fish exports data in Table 29 it can be seen that there was a high level of activity which is believed to have dropped significantly due to the EU export ban.. Share of exports to the EU market were significant, representing, respectively 40%, 51% and 73% of total quantity between 1998 and 2000. The principal countries in the EU receiving exports from Cape Verde were Spain and Portugal. 1999 was the most valuable year with exports amounting to about €1.6m.

Table 29: Cape Verde exports to EU markets by main product type

NHS Codes	1997		1998		1999		2000		2001		2002		2003	
	€,000	t	€,000	t	€,000	t	€,000	t	€,000	t	€,000	t	€,000	t
0302	367	123	24	5	87	17	95	22	1	1			26	15
0303	202	193	664	850	788	545	574	204	6	11	32	52		
0304	102	22	22	15	310	55	127	10						
0305	18	4	5	0	1	0								
0306	355	22	668	30	456	19	132	6					251	10
0307			2	0										
03	1,044	364	1,384	903	1,643	634	933	242	7	12	32	52	277	26
1604	371	88	36	17		0	20	10		0		0		0
Total	1,415	452	1,420	920	1,643	634	953	252	7	12	32	52	277	26

Source: Eurostat

03 Fish, crustaceans, molluscs, other aquatic invertebrates.

0302 Fish, fresh, or chilled (excl. fish fillets)

0303 Frozen fish (excl. fish fillets)

0304 Fish fillets and other fish meat

0305 Fish, dried, salted or in brine, smoked fish.

0306 Crustaceans, live, fresh, chilled, frozen.

0307 Molluscs, and other aquatic invertebrates,

1604 Prepared or preserved fish.

A.4.1.8 Fishery Products Health Conditions

Following the results of the re-evaluation mission and consequent written guarantees of the Competent Authority of Cape Verde to improve the deficiencies still evident, Cape Verde was included by the EC in October 2003 in the List 1 of third countries from which the import of fishery products is authorised for human consumption (Commission decision 97/296/EC drawing up the list of third countries from which the import of fishery products is authorised for human consumption as amended).

One of the most important standing requirements is the accreditation of the main analytical laboratory methodologies performed for the safety of fish products, scheduled for the end of 2004 or second semester of 2005.

In respect to the sanitary condition of fishing vessels the Competent Authority is undertaking a campaign highlighting the need for vessels to get a fishing license which will include a sanitisation and health inspection to approve the activity of the vessel in order to supply exporting companies. At present there are 6 vessels above 18m length, and 6 vessels with a length between 10 and 16m that have a licence.

Presently, Cape Verde figures amongst the countries which will receive assistance from the EU assistance program (EDF) “Strengthening fishery products health conditions in ACP/OCT countries” as requested by the Cape Verdean Authorities”, with an indicative allocation of €946,700 over two years.

Specific recommendations are suggested to strengthen the performance of the Competent Authority:

- technical assistance and training for validation and accreditation of laboratory methodologies;
- training of inspectors and industry according to HACCP systems implementation;
- technical assistance on the organisational aspects of the CA.

A.4.2 Socio-economic issues & Livelihoods analysis

A.4.2.1 Employment dependency

Dependency on fishing activities is quite evident in Cape Verde. The employment ratio shows for 2000, 5.2% of the active population having around 9,000 jobs in the Fisheries sector. This number however would be slightly higher, if the number of fishers working in foreign fleet was known. In 2004, it is believed that around 200 fishers were registered as crew members of the foreign fleet, mainly EC vessels.

In addition Cape Verdean fishers are known to work in several fleet sectors in the EU domestic fleet. For example the Azores pole and line fleet also employs some 170 on a seasonal basis. Fishery sector employment linked to EU fisheries is therefore considerably more important than the direct impact of the FA would suggest.

On the artisanal side a considerable number of fishermen just take from the activity an amount of fish for food for the family and a small part to be sold due to the small size of communities and lack of commercialisation system. It is also common to have agriculture workers involved in fishing when agricultural work alone is not enough to produce a living, using the fishing as a source of food supply.

Fisheries is therefore significantly important for giving income and/or as source of food supply. In both cases this activity has an important role for poverty reduction.

Of significant importance is the activity of fish vendors, showing a dependency ratio of 2.0% of women in the activity. Not only is this commerce activity important because of the number of jobs, representing 3,500 in 2000, it is also socio-economically crucial in terms of the economic viability of fishermen and food security to the population.

Table 30 : Employment and ratios

	1989	1995	2000
Total Population	336,610	385,957	434,624
Total Workforce	95,186	137,958	174,664
Employment in Fisheries Sector			
Artisanal Fishermen	4,258	5,521	4,283
Industrial Fishers	710	452	996
Fishers in Industrial Foreign Fleet ^{/a}	n/a	n/a	n/a
Women Fish Vendors	1,500	2,100	3,500
Processing industry	-	-	166
Administration (Ministry, DGP, INDP)	453	445	120
Total employment in fisheries	6,921	8,468	9,075
Ratios (employment)			
Ratio of Total employment in Fisheries	7.3	6.1	5.2
Ratio of Total employment in Fishing	5.2	4.3	3.0
Ratio of Total Fish Vendors activity	1.6	1.5	2.0

Source: INE, GEP, INDP

^{/a} No data available for the years considered will suggest higher number of total jobs in fisheries and ratios.

A.4.2.2 Livelihoods analysis

- **Human Capital**

High school enrolment and quality of health are important objectives of the governments policies and have been since the 1990s. These are extended to fishing and rural communities where transport is made available for children to go to school and health campaigns are integrated.

Fishermen of Cape Verde are considered as a willing and appreciated workforce by the foreign fleets, although the majority are not technically high skilled. In the artisanal sector most of the fishers are however identified as subsistence fishers, principally due to their limitations in skills, educational attainments and individual expectancies, which contribute to limited livelihoods. The literacy rate of fishermen is low, showing in 1999 from a sample of 568 fishermen from all the different islands that only 65% could read and write.

The fishery institutions in Cape Verde (DGP, INDP, ISECMAR and some NGOs) have in the past focussed on the upgrading of human resources in the sector. In this respect they developed, since 1989, several initiatives targeting in particular training of fishermen, and their integration in programmes with the objective to promote their knowledge in using different technologies (fishing gear, motors, amongst others). The results are however not yet substantive, and have suffered from a lack of coordination between the several institutions and actions, a lack of continuity of the programmes, and a lack of an overall orientated strategy amongst the institutions in order to strengthen the intended outcome.

On the research side, Cape Verde has undertaken several work covering the knowledge of part of the coastal resources (lobster and small pelagics) and oceanographic characteristics of the EEZ, although much more is required. In particular, there is a great lack of information in reference to deepwater resources, both from the researchers side and from the fishermen's practices. Specialised human resources for research are limited with only 3 post-graduate staff, none of whom have specialised knowledge in the area of stock assessment.

- **Natural Capital**

The Cape Verde archipelago is characterised by high marine biodiversity although the resource dimension of stocks appears to be much more limited in comparison with other archipelagos like the Azores and Madeira. There are considerable, good quality, resources of medium and big pelagics and of some demersal species, although the resource availability varies from island to island, being greater in the islands of Mayo and Boavista. Resource management of coastal species is effective, being supported by a reasonable good statistical information system of the artisanal fisheries.

Post-harvest aspects need to be improved in order for fishers to get full utilisation of catch. Market distribution system is very weak, and ice availability exists only for communities near the main cities. These factors are responsible for the fact that most of the small fishing communities have just a subsistence type activity, limiting livelihoods.

- **Social Capital**

The Cape Verdean fishermen are characterised by their individualism. Each vessel operates individually, there are no fishermen's unions and the industrial vessel owners association is weak. These facts contributes towards limited development of their livelihood objectives.

The industrial and semi-industrial ship owners are, in general, recognised by their under-capitalised status and subsidy dependent ownership. In consequence these two characteristics also affect the access to existence of easily accessible credit lines (markets and banks) as ship owners have no capital to secure the loans with and no real impetus to search for ways to secure credit believing that eventually a subsidy will become available..

There have been no social studies undertaken are not known to exist that to reflect socio-economic links in communities, status of fishing households or other social issues, which limit the present analysis.

- **Financial Capital**

The state institutions (mainly FDP) have had played an important role in giving micro-credit for artisanal fishing operations and subsidised loans with lower interest rates for the industrial and semi-industrial fleet.

Another important source of income has come from remittances. These represented in 2000 about 15% of GDP in 2000, however there are no numbers available to show how many households receive this support and how frequent it is. It seems that specific investment in the fisheries is not undertaken by migrants, or from their remittances.

In respect to the financing of larger size companies, which are all related to fish processing activities, it seems that the main companies are all associated with foreign partners and therefore developed with foreign financial capital. Some of these companies have also benefited from the status of being export companies which has given them various financial benefits and advantages.

- **Physical Capital**

During the nineties fishermen achieved improved access to resources through the motorisation of the artisanal fleet assisted by the support of institutions (INDP, DGP and FDP). In 1999, 73% of the 1,290 small-scale vessels had an outboard motor. Data on replacement of motors, or other equipment, is not reported and probably has not occurred, however a continuing training programme for motor maintenance and fishing gear utilisation has been made by INDP.

There is an important lack of onshore support infrastructure for the reception and storage of landings and this is considered essential for the development of the export industry.

At a household level, asset ownership and welfare are usefully expressed by the following socio-cultural indicators developed in 1999 from a sample of 568 fishers representing all the islands:

- fishermen with their own house or rented, supported by the income of fishing; 66,5%
- with telephone; 30,1%
- with radio; 68,1%
- with television; 35,7%
- with water supply; 8,3%
- with sewage at house; 8,1%
- with electricity; 52,3%

These indicators reveal an interesting application of income with almost 70% of the fishers having a house, although data for improved sanitation and access to improved water sources are less positive in the context of national averages of 71% and 74% respectively, and is related to the location of the communities in rural and remote areas.

- **Vulnerability context**

An important vulnerability factor for the tuna fisheries segment in Cape Verde is said to be the availability of live bait for the pole and line activities, affecting the economic performance of this fleet and the fishermen dependent on the fisheries. Although this statement appears to be contradictory to the stated resource potential of small pelagics, it is more a reflection of the strategy of GoCV towards resource allocation and the exploitation of juveniles of small pelagics for live bait.

The small pelagic resource is considered to be sensitive on account of the limited width of the continental shelf and dependence upon favourable meteorological conditions for nutrient availability (run off). Although the resource is reported to be in good condition, the abundance is not considered by the GoCV to be sufficient for intensive utilisation by both the national and the EC fleets. The national industrial pole and line fleet frequently has to go to Senegalese waters to catch small pelagics, and a large part of the fishery for livebait by EU vessels is reported³⁵ to be made outside CV waters .

³⁵ The Commission's comments to the Draft Final Report on Cape Verde, August 2004

Resource conflicts can be identified as directly and indirectly influenced by the activity of the EC fleet. As indicated above, there are direct conflicts between fleets in the competition for livebait, and in addition there are anecdotal reports of conflicts between fleets at fishing grounds (particularly sea mounts). Of indirect influence to the livelihoods of fisheries communities, and population in general, is the tuna fishery itself, especially as the catch of artisanal fisheries has tuna as the major component (around 40% of respective catch) and noting that domestic fish supply is mainly attributed to this sector.

- **Transforming Structures and Processes**

Cape Verde has a complete structured political system covering the different areas of political intervention from the legislative and ministerial bodies to the judicial body. The fisheries area in Cape Verde is integrated in the Ministry of Agriculture and Fisheries having several executive agencies with roles in different fields. Sometimes it seems that these are excessive in number, regarding the size of the country and the sector, although having the territory divided into 10 islands does call for more persons to be involved. Apart from the number of executive agencies the problem is probably that these people are not communicating between themselves as well as they could, or there is an overall lack of orientated fisheries policy and strategy.

The existence of a key parastatal cold storage company acting deficiently in the commercial field is recognised as a weak component in the development of the sector. Cold storage is one of the key elements for the development of the private sector giving the structure for distribution, marketing of fish products and supply for the private processing industry. Presently this parastatal company is in the process of privatisation, which it is believed will bring new investors and will be able to complete the commercialisation chain with refurbishment of the cold storage capacity.

At present the market system does not function as a complete network from producer to consumer, and this is an important constraint on the development of the sector, especially for the remote artisanal fishing communities which do not have in place any distribution system.

In the fisheries private sector, as described above, Cape Verde is characterised by a group of stakeholders without investment capacity, weak financial and commercialisation activity and subsidy dependent. Also the existing producers organisation is weak and has a lack of intervention. The processing industry comprises two companies which seem to be able to maintain an effective activity, having EU and US exporting markets as targets.

A.5 POTENTIAL AND LIMITS OF FISHERIES

The fishing fleets active in Cape Verde waters (including national and foreign fleets) are described in detail in section A.4.1.

A.5.1 Infrastructure facilities

- **Port facilities**

As noted previously, there are many fish landing areas in the Cape Verde Islands. These include largely beaches with concentrations of small artisanal fishing vessels, 5-7 meters in length with no particular facilities for fish processing or cold storage; as well as 4 ports which cater for fishing vessels.

The port of Palmeira is located on the Island of Sal. It is 5 Km from the international airport. The port contains approximately 300 meters of wharf and also contains a fuel oil depot that supplies not only fishing vessels, but more importantly, the airport.

A privately owned company 'Bom Peixe S. A.' is based in Sal Islands, located in close proximity to the port of Palmeira. The Company is equipped with two storage chambers with 1,200 cubic ton capacity, two freeze-dry tunnels with a capacity of 10 metric tons/24 hours, a machine that makes 10 ton of ice every 24 hours and five cold (-23 degrees) storage chambers of 7,600 ton total capacity.

The port of Praia is located on the Island of Santiago. Praia is the capital of Cape Verde and the centre of commerce. The port has a cold storage facility 'Entrepasto Frigorífico da Praia', built with African Development Bank support and currently under private management. The fishing part of the port of Praia has

now been extended and the facilities improved. It is now equipped with the ice-makers with a capacity of 18 t / 24 hours, three cold (-25 degrees) storage chambers totalling 1,280 cubic meters, three refrigerating chambers for a total of 270 cubic meters, a refrigerating tunnel of 8 metric tons/8 hours and a freeze-dry brine tank of 4 ton.

Porto Grande, considered the second CV port, and located in the island of S. Vicente is both a commercial and fishing port. The State owned storage and post-harvest support company 'INTERBASE S.A' is located there. The company is undergoing privatization. It is equipped with a freeze-dry tunnel with a capacity of 8 metric tons/8 hours. Three cold (-20 degrees) storage chambers of 1,500 ton each. Three chambers of 300 cubic meters each, two refrigerating chambers for a total of 700 cubic meters and a machine that makes 15 tons ice per day. There is also a brine bath, capable of handling 1 mt/hr, a blast freezer tunnel capable of handling 1 mt/hr and contact freezer capable of handling 1,1 mt per three hours.

The commercial portion of Porto Grande has been extended and modernized. At present, the port is capable of handling container ships using modern technology. Also important is that vessel repairs facilities are located here in and are undertaken by the company CABNAVE.

The island of S. Vicente also contains a newly developed fishing port 'Cova d'Inglesa'. This port supports the semi-industrial Cape Verdean fleet. It is equipped with a freeze-dry tunnel with a capacity of 6 metric tons/8 hours. One chamber of 300 cubic meters and a machine producing 10 tons ice per day.

- **Vessel repair facilities**

Complete vessel repair facilities is available on the island of S. Vicente. CABNAVE S.A was built in 1983, and includes a slipway that can handle vessels of a maximum of 110 m, and 2800 mt displacement. The shipyard currently employs 250 skilled workers. Unfortunately, the facility is more than 50% underutilized at the present.

A state owned shipyard, ONAVE, also in S. Vincente caters for small ships, mainly fishing boats. This company employs 5 direct workers and almost 70 workers in outsourcing regime.

- **Vessel Construction**

The artisanal fishing boats, which are built locally, are wooden and built using imported wood. The cost of each boat (5.50 – 6.00 m) is between 60,000 and 120,000 ECV (€544 – €1,088) the price and design varying slightly from one island to another.

Some of the semi-industrial and industrial fleet are built locally. There are three small artisanal workshops that build small fibreglass fishing boats. However most of the vessels are imported from European countries principally Portugal and Spain.

- **Potential labour force**

Cape Verde has an ample supply of skilled workers available for fishing operations. The workers are generally industrious and highly trainable. Wages are low. Strikes and others forms of labour strife are generally rare.

- **Availability of power and fresh water**

Cape Verde has no natural power source, except wind and sun. Fuel must be imported at considerable expense. Nor are there natural lakes or large rivers. Fresh water deficits on certain islands are made up through the use of desalinization plants, again a fairly costly operation.

- **Facilities for overseas Transport**

The country is fortunate in having the Amílcar Cabral international airport on the Island of Sal. A new airport will be operational by the end of this year on the Island of Santiago. Amílcar Cabral international airport has

two-mile long runway, and air connections with Europe, North and South America, South Africa. Regarding shipping services, the port of Mindelo can handle big ships and Praia can accommodate ships drawing 10m.

- **Inter-island connections**

The islands are serviced by the national domestic airline, TACV (Transportes Aéreos de Cabo Verde) which operates small airplanes, ranging in carrying capacity from 17 to 48 seats.

There is some inter-island shipping, particularly with respect to imports landed at Mindelo or Praia. Fish landed by foreign flag vessels may be sent by ship to Sal, the cargo then offloaded and the trucked to the international airport.

A.5.2 Fish Catches

Total fish production in the Cape Verde EEZ is estimated to have been 11,132 tonnes in 2002. About 52% of total production is from the CV artisanal fleet, and about 29% of total production from the Cape Verdean industrial fisheries. The EU fleet accounts for some 16% of fish production in the EEZ, as shown in Table 31. It should be noted that no data was available for catch from the Senegalese fleet.

Table 31 - Total Production (all fleets)

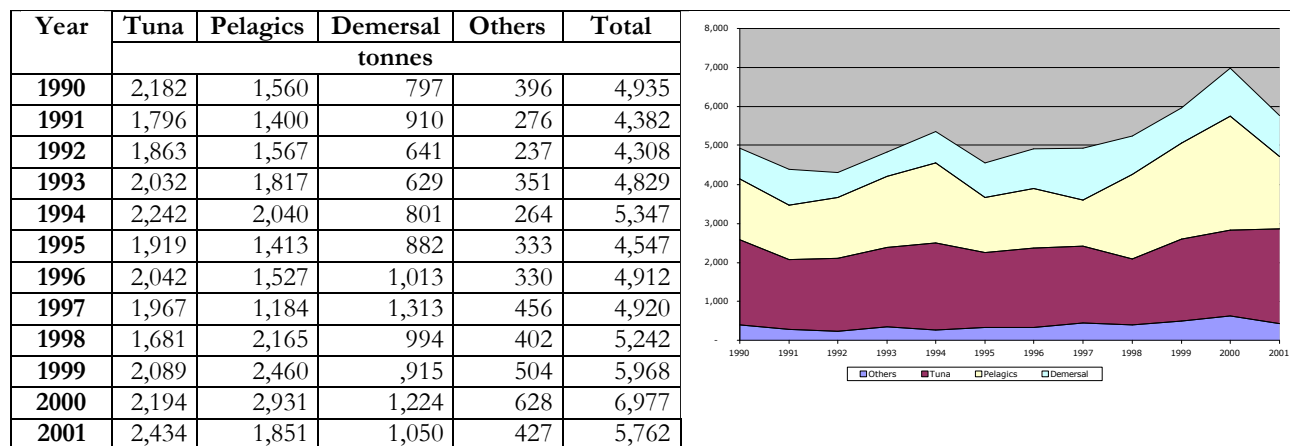
	Production (Tonnes)	As % of CV fleet production	As % of total production
CV Subsistence and Artisanal Fishery	5,762 ^{/a}	64	52
CV Semi-Industrial and Industrial Fishery ^{/a}	3,241 ^{/a}	36	29
EC FA Fleet	1,813 ^{/b}	-	16
Japanese Fleet	316 ^{/c}	-	3
Senegalese Fleet	no data	-	
Total CV Fleets	9,003		81
Total All Fleets	11,132		

^{/a} INDP, 2001 ^{/b} Catch declarations (EU Commission), 2002 ^{/c} DGP (CV) for 2000

A.5.2.1 Artisanal fishery

The artisanal fishery is an important one, contributing about 70% of the total national catch and about 50% of the production from the EEZ. Between 33 – 50% of the production consists of tuna species, and around 33% is of small pelagic fish with the balance being made up of demersal fish and shellfish from coastal fisheries. Evolution of the catches is shown in Table 32. Catches show some annual variation, with an upward trend and a peak of nearly 7,000 tonnes in the year 2000

Table 32: Catch evolution from artisanal fleet during the past 12 years by species (tonnes)

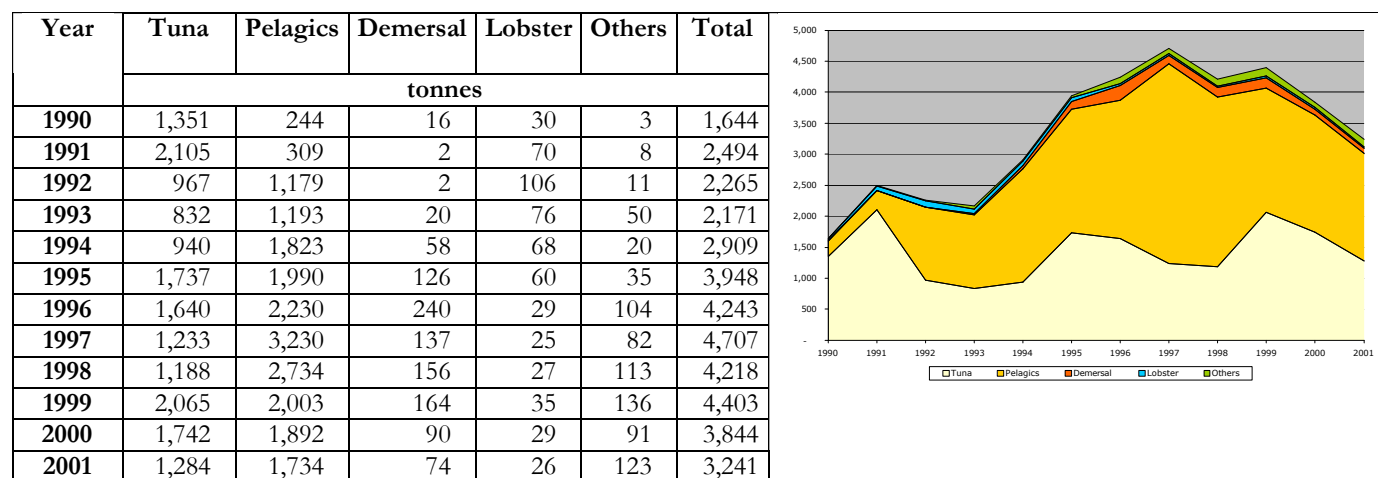


Source: INDP

A.5.2.2 Cape Verde Industrial fishery

The industrial catch from the Cape Verdean fleet is mainly directed towards species such as tuna (pole and line using livebait), small pelagic fish, demersal fish and lobster. The average annual catch increased notably during the 1990s as effort increased as the fishery developed it peaked at 4,707 tonnes in 1997.

Table 33: Catch evolution of national industrial fleet (tonnes)



Source: INDP

In the past the development of the national tuna fishery has been constrained by the fact that the absorption capacity of the local market is very low and a considerable quantity of the catch was either not sold or was sold at a very low and unprofitable price. Lack of access to the EU market due to failure to comply with the health conditions between 2000 and 2003 imposed demand limitations on the development of the fishery. In addition the tradition of the pole and line Capeverdean tuna fisheries is rather limited in its application since it depends on live bait (principally three species of scad - *Decapterus macarellus*, *Decapterus punctatus* and *Selar crumenophthalmus*) themselves a migratory and seasonal resource and when tuna are abundant and feeding in the Capeverdean EEZ there is consequentially a general lack of live bait.

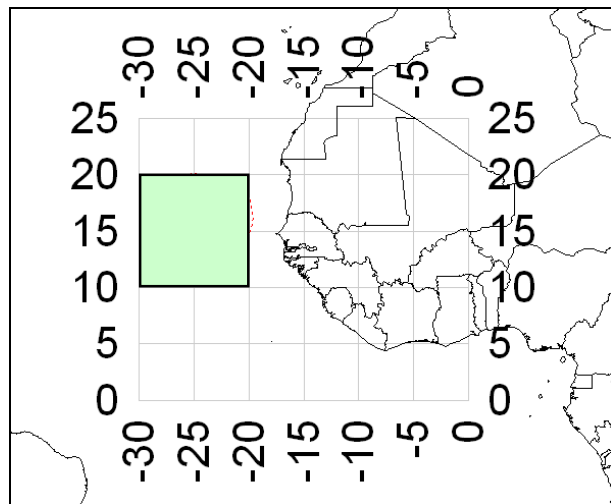
A new program of industrial fishing has been proposed by the Cape Verdean authorities, with the aim of renewing the fleet with larger and more independent vessels. The main objective of this programme is to extend the range of the national industrial fleet and to allow full exploitation of the Cape Verdean EEZ, and possibly even the sub-regions. The newly established access to the EU market will help to make this program more attractive.

A.5.2.3 Tunas and tuna-like fish

The main oceanic fisheries in this region are for tuna (with bait boat and purse seine vessels targeting skipjack and yellowfin). Some bigeye is also caught by purse seiners. Far eastern longliners target bigeye tuna, whilst EU longliners target swordfish.

ICCAT data catch information for the tuna and tuna-like species targeted by the foreign vessels is not specifically available for the Cape Verde EEZ, but is available for the sea areas which include this EEZ. These are indicated on the map in Figure 2 and defined by the square with sides 10°N to 20°N and 20°W to 30°W (which we will call here the Cape Verde ICCAT Box). The area covered by this EEZ corresponds to approximately 50% of the Cape Verde ICCAT Box.

Figure 2 - ICCAT data square and the Cape Verde EEZ



- Tuna catches from pole and line vessels and purse seiners**

In this *Cape Verde ICCAT Box* the major fishing effort is by pole and line, longliners, purse seiners and artisanal fishers from Cape Verde. The evolution of the total catches reported to ICCAT for this area is shown in Table 34, there will be some overlap with the artisanal and local industrial fishery catch data reported above. The total catch of tunas and tuna like species was 9897 tonnes in 2000. The overall catch composition during the period 1990 to 2000 suggests that 36% of the catch was skipjack, 28% yellowfin and 27% bigeye tunas. Other species caught are swordfish, albacore and marlins but none represents more than 4% of the catch.

Pole and line and purse seiners catch mainly skipjack (respectively 64% and 67% of their catch in the period 1991-2000) and 25% Yellowfin. Bigeye tuna accounts for about 10% in both fisheries. In the period from 1991 until 2000, the catches are around 36% skipjack, 28% yellowfin, 27% bigeye, 4% swordfish, the remaining 5% being a mixture of albacore, bluefin, black marlin, sailfish, and white marlin. The ICCAT data has no available data for sharks specifically in the *Cape Verde ICCAT box*. The maximum total historical catch in Cabo Verde occurred during 1976 with around 14,000 tonnes reported catch.

In the period 1991-2000 the annual medium catches were 2921 tonnes of Yellowfin, 2791 tonnes of Bigeye, 3723 tonnes of Skipjack and 400 tonnes of Swordfish. European Union catches reported to ICCAT for this region for the same period accounted for 11% of the bigeye tuna catch, 56% of the skipjack, and 23% of the

yellow fin catch. The balance of the catches is due mainly to vessels from Cape Verde and other third countries.

Table 34: ICCAT catch reports for the Cape Verde ICCAT Box

Year	tonnes									
	Albacore	Bigeye	Bluefin	B Marlin	Sailfish	Skipjack	Swordfish	W Marlin	Yellowfin	Total
1990	3	1,603		23	6	1,501	1134	2	2,916	7,187
1991	939	1,628		75	1	3,378	142	3	2,895	9,061
1992	6	1,442		33	1	2,100	134	12	2,129	5,857
1993	53	1,746		33	11	1,463	158	6	1,822	5,291
1994	18	2,839		125	17	2,857	220	111	4,320	10,505
1995	22	2,885		130	686	1,710	335	12	2,663	8,443
1996	474	3,731	6	142	616	2,242	617	23	3,359	11,208
1997	382	3,140		199	564	6,675	772	17	3,148	14,897
1998	4	3,590	3	172	278	6,187	560	17	3,118	13,929
1999	8	2,779		175	422	8,147	714	22	3,352	15,618
2000	16	4,138		83	416	2,475	353	12	2,403	9,897
Average	192	2,792	5	117	301	3,723	401	23	2,921	10,471
%	2	27	0	1	3	36	4	0	28	100

Source: ICCAT

The estimated catches of main large pelagics and skipjack attributable to EU vessels fishing in the Cape Verde ICCAT box are shown in the table below.

Table 35 - Estimated catch of EU vessels in Cape Verde EEZ, and all ICCAT 2000

Area	Cape Verde ICCAT Box			ICCAT Area		
Year	2000			2001		
Species (stocks)	Total tonnes	EU	%	Total tonnes	EU	%
Yellowfin	2,403	110	4.6	157,269	63,824	40.6
Skipjack (E.Atlantic)	2,475	1,049	42.4	109,897	49,714	45.2
Bigeye	4,138	655	15.8	96,482	16,476	17.1
Swordfish (N.Atlantic)	353	208	58.9	9,797	4,782 ^a	48.8

Source: ICCAT ^{/a} provisional data

Table 36 to Table 39 show the catches of the main species of large pelagic fish in the ICCAT Cape Verde box broken down by the fishing method. Yellowfin and Skipjack tunas comprise the majority of the catches, with purse seiners producing the most fish. Note that most of the Bigeye tuna is targeted by longline vessels.

Table 36: Catches of Yellowfin by Gear

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total	%	3yr Avg (tonnes)	%
	tonnes													
Pole&Line	761	283	207	178	86	91	267	524	1339	501	4237	15	788	27
Longline	139	204	198	264	394	573	294	524	278	250	3117	11	350	12
Others	1,414	1,257	1,365	1,560	1,365	1,291	1,382	1,145	1,185	1,388	13,351	46	1,239	42
P.Seiners	581	386	52	2,317	818	1,404	1,206	925	550	265	8,503	29	580	20
Total global	2,895	2,129	1,822	4,320	2,663	3,359	3,148	3,118	3,352	2,403	29,208	100	2,958	100

Source: ICCAT data from Catdis.MDB, for the ICCAT area (10/20 box <http://www.iccat.es/accesingdb.htm>)

Table 37 Catches of Bigeye by Gear

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total	%	3yr Avg tonnes	%
	tonnes													
Pole&Line	129	50	14	32	13	99	205	57	559	817	1975	7	478	14
Longline	1,316	1,236	1,595	2,215	2,656	3,194	2,106	2,412	1,669	3,117	21,516	77	2,399	69
Others	92	107	90	276	39	77	60	54	1	2	798	3	19	1
P. Seiners	85	48	47	315	176	361	769	1,068	550	202	3,621	13	607	17
Total	1,621	1,442	1,746	2,839	2,885	3,731	3,140	3,590	2,779	4,138	27,910	100	3,502	100

Source: ICCAT data from Catdis.MDB, for the ICCAT area (10/20 box <http://www.iccat.es/accesingdb.htm>)

Table 38 Catches of Skipjack by Gear

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total	%	3Yr Avg tonnes	%
	tonnes													
Pole&Line	1,335	851	643	881	153	448	1,375	2,317	2,235	968	11,205	30	1,840	11
Longline				0				0			1	0	0	0
Others	676	397	330				56	54	16	19	1,548	4	89	1
PS	1,367	852	491	1,975	1,557	1,794	5,245	3,815	5,896	1,489	24,480	66	11,199	67
Total	3,378	2,100	1,463	2,857	1,710	2,242	6,675	6,187	8,147	2,475	37,234	100	16,809	100

Source: ICCAT data from Catdis.MDB, for the ICCAT area (10/20 box <http://www.iccat.es/accesingdb.htm>)

Table 39 Catches of Swordfish by Gear

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
	tonnes										
Longline	140	131	156	214	324	611	772	560	714	353	3,974
Others	2	3	3	6	11	6	1				31
Total	142	134	158	220	335	617	772	560	714	353	4,005

Source: ICCAT data from Catdis.MDB, for the ICCAT area (10/20 box <http://www.iccat.es/accesingdb.htm>)

Table 40: Catches by Pole&Line (t) in the Cape Verde ICCAT Box (1991-2000)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Overall %
	tonnes										
Bigeye	129	50	14	32	13	99	205	57	559	817	11
Skipjack	1,335	851	643	881	153	448	1,375	2,317	2,235	968	64
Yellowfin	761	283	207	178	85.9	91.2	267	524	1,339	501	24

Source: ICCAT data from Catdis.MDB (<http://www.iccat.es/accesingdb.htm>)

Table 41: Catches by Purse Seiners (t) in the Cape Verde ICCAT Box (1991-2000)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Overall %
	tonnes										
Bigeye	85	48	47	315	176	361	769	1,068	550	202	10
Skipjack	1,367	852	491	1,975	1,557	1,794	5,245	3,815	5,896	1,489	67
Yellowfin	581	386	52	2,317	818	1,404	1,206	925	550	265	23

Source: ICCAT data from Catdis.MDB (<http://www.iccat.es/accesingdb.htm>)

- Catches from the surface longline fishery

The catches reported by surface longliners operating in the *Cape Verde ICCAT Box* are shown in Table 42. It should be noted that this indicates catches by vessels of all nationalities. The main operators are EU and far

eastern (Taiwanese and Japanese). No skipjack is caught in this fishery. The data indicates a steady rise in the bigeye catch throughout the 1990s, and a relatively insignificant yellowfin catch.

Table 42: Catches by Longliners in the 10/20 square (1991-2000)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	tonnes									
Bigeye	1,316	1,236	1,595	2,215	2,656	3,194	2,106	2,412	1,669	3,117
Swordfish	140	131	156	214	324	611	772	560	714	353
Yellowfin	139	204	198	264	394	573	294	524	278	250

Source: ICCAT data from Catdis.MDB (<http://www.iccat.es/accesingdb.htm>)

A.5.2.4 Overview of stock status and utilisation potential

- **Large pelagic fish**

In terms of migratory stocks of large pelagic fish exploited in Cape Verdean waters, management policy should take account of the wider stock situation in general and ICCAT recommendations in particular.

According to ICCAT, most of the commercial tuna stocks are now more or less fully exploited. Yellowfin tuna are close to fully exploited and the ICCAT recommendation is for no increase in effort. Although there are TAC levels set, increases in fishing power of purse seiners have given rise to concern, which may indicate that a slight reduction in vessel numbers may be necessary to meet this management objective.

Cape Verde occupies a unique position with respect to skipjack tuna, more or less straddling two defined stocks. This makes specific management measures more difficult. With respect to the eastern stock, which is assumed to form the majority of the catches, there are no specific recommendations and within the local stock, exploitation rates appear to be well within the sustainable limits. There is some concern over increases in effort related to more extensive use of fishing with objects, but there is no specific evidence for concern in relation to the Cape Verde EEZ. In other regions the introduction of a moratorium on skipjack fishing has been implemented as a measure to protect bigeye tuna. Again, in this fishery this is not considered to be a specific problem. Therefore no specific changes are considered necessary for the management of this stock.

Bigeye tuna is considered to have been subject to excessive effort of up to 15% beyond the MSY and ICCAT has recommended management measures which include considering a TAC of 100,000 tonnes and a minimum size of 3.2kg. Therefore given that the fishing effort is generally recognised as being too high, a reduction of effort is recommended to bring catches to within the TAC, and a limit in catches to the 1991/1992 average level is recommended to be made by the main fishing nations. Fisheries management measures should therefore aim to limit fishing opportunities for this species to the appropriate levels.

Swordfish is also subject to management measures by ICCAT, with a TAC of 14,340 tonnes. Minimum catch sizes are also laid down. Reported catches are currently substantially below the MSY, but there is likely to be a substantive level of IUU fishing, which indicates the need for a precautionary approach. This would suggest that there should be no increase in effort on these stocks.

- **Shark stocks**

There is a lack of reliable data on which to base a definitive stock assessment in relation to the main commercial shark species. There is evidence of a significant decline in the abundance of blue shark. Data from observer programmes on long line vessels in the ICCAT area also provides some information, but this is not collated in a readily accessible form. Table 43 shows that there some 897 reports filed in the 18 years 1982 to 2000, of which only 60 were from EU vessels.

One of the difficulties within the ICCAT Framework is that the standard ICCAT reporting form used in recent years does not specifically require shark catches to be recorded except as a generic “other” category. Recent modifications to the form have addressed this omission, but seem not to have been fully implemented at fleet level. Member State logbooks do however have this requirement, but may not always distinguish between different species of shark. ICCAT has only recently required that reports from members should declare shark catches. There is some concern that the traditional fishers of this resource have under-declared catches. Overall, the reporting of shark catches by EU vessels provides insufficient basis for resource management decisions. Given the evidence of declining abundance a precautionary approach is therefore highly advisable.

Table 43: Number of reports of shark catches to ICCAT by country (1982-2000)

Flag	Number of reports	
Brazil (Incl. Charters)	95	
Canada	102	
Cote Divoire	25	
EC.España	48	60
EC.Ireland	2	
EC.Portugal	6	
EC.UK	4	
Japan	24	
Mexico	26	
Trinidad	30	
U.S.A.	412	
UK.Bermuda	24	
Others	99	
TOTALS	897	

Source: ICCAT

- **Small pelagic fish stocks**

These stocks could sustain an increase rate of exploitation of about 4,000 tonnes per year, bringing total production to the estimated MSY of 9,000 tonnes per year.

- **Demersal fish stocks**

Except in one area there is no systematic stock data. In most areas the exploitation levels for many species are low and it would appear that many of the species with commercial potential are still under-exploited.

- **Crustacean stocks**

Anecdotal evidence suggests that in the greater part of the archipelago the coastal fishery for green lobster (*Panulirus regius*), brown lobster (*Panulirus echinatus*) and the slipper lobster (*Scyllarides latus*) is relatively lightly exploited, with stocks in good condition especially in the islands of Sal, Boavista and Maio. In these regions it appears that the fishery could sustain a modest extension of the fishing effort.

The pink lobster (*Palinurus charlestoni*) has historically been exploited at levels at or above MSY, with stock recovery associated with loss of access to export markets. Previous experience has shown the dangers, and although there is no specific management measure indicated at present, there is a need for monitoring.

- **Overall resource availability**

The summary of the resource availability in Cape Verdean waters is shown in Table 44. Most resources are fully exploited. There is known potential for increasing exploitation of demersal fish resources and the coastal lobster fishery. The situation with the pelagic fisheries suffers from conflicting evidence on stock status and although there is the possibility of a sustainable increase in exploitation rates this needs confirmation by additional research. The pink lobster fishery appears to be under-exploited, but it is not considered desirable to substantially increase effort levels given the over-exploitation in the past.

Table 44: Summary of MSY and average catch (1997 – 2001) and unexploited potential for Cape Verdean fish resources

Resources	Potential (tonnes)	Average catch 1997-2001 (tonnes)	Under-exploited opportunities (tonnes)
Large pelagic fish resources (whole ICCAT area)			
• Yellowfin	110,000	115,911	NIL (should be keep fishing effort of 1992; no quotas)
• Skipjack (Eastern stock)	n/a	108,897	NIL (population on the Senegalese area seems to be stable)
• Bigeye	100,000	100,000	NIL (with TAC)
• Swordfish	14,340	9,800	NIL (with TAC)
• Sharks	N/A	N/A	NIL (possibility of significant over-exploitation)
Small pelagics			
• <i>Decapterus macarellus</i>	5,000	5,000	4,000
• <i>Decapterus punctatus</i>			
• <i>Selar crumenophthalmus</i>			
Sandy demersals	4,750	1,124	>3,500
Rocky demersals	N/A		
Pink lobsters	100	40	60 tonnes?
Coastal lobsters	N/A	N/A	Substantial in some areas
Deep water resources	?	?	?

A.5.3 Upstream and downstream activities and socio-economic issues

• Upstream

The fisheries sector comprises of very limited upstream activities related to vessel construction and repairs, without any specialised suppliers or commerce of fishing gear. The artisanal fishing communities have some artisanal naval carpenters working in vessel construction and repairs of artisanal vessels, but these are not fully accounted for in social statistics. Other type of repairs, for example related to motors and electronics, are usually carried out at garages not specifically working for the fisheries.

In respect to servicing, fuel and lubricants suppliers, these are supplied by the only 2 fuel companies in the country, which supply all these needs in Cape Verde. The socio-economic dependency of these upstream activities on fisheries is relatively low, although not quantified. The fuel supply of the EU vessels is usually purchased in their own country of origin or in other ports according to international prices. Should fuel be bunkered in Cape Verde, it is invariably paid for outside of the country and there is no significant value added for Cape Verde.

The repairs of industrial and semi-industrial fishing vessels is done in particular by 2 companies (Cabnave and Lusonave), although Cabnave focus's much more on foreign vessels of big dimensions and is equipped with modern high-tech equipment. In both shipyards the link of the activities with national or international fisheries fleet represents the major part of sales volume. In fact Cabnave has been receiving a fleet of 30 Chinese super-trawlers which, although not reported as fishing in CV waters, have used CV docking facilities for repair and maintenance. Employment in this activity involves about 200 men, with about 150 being highly skilled in the different areas of service. Manpower is internationally certified and training programmes are frequent. Marketing efforts have been established in order to encourage Spanish vessels to utilize these facilities, which could be highly important for the company.

• Downstream

Processing activities are very limited presently involving 3 EU export approved companies and 4 cold storage facilities. In total around 170 persons are employed, about 90% being women. Labour in this area is not

specialised, although training programmes are developed covering processing techniques and hygiene/food safety requirements.

Fresh fish selling activities are managed entirely by women. This activity is linked with landings of all national fishing activities (artisanal, semi-industrial and industrial fleet), being located mainly in the urban areas. This activity shows a considerable increase in the women involved which has grown in parallel with the growth of population and of the active population in the country, and probably also as a result of increase of potential fish consumers, in total at least 3,500 women in 2000 are involved in this activity as mentioned before in the employment dependency section.

An important social impact of this activity, health related, arises from the poor sanitary condition of fish handled by street vendors, without ice and without protection from the sun. Only a low number of women vendors have their place at designated fish markets, in some cases achieving quite good hygiene conditions. However, the majority are street vendors where it is not possible to guarantee good hygiene and preservation condition for fish products. The street vendors practices are considered to be very important as they may introduce an important hazard which is species related (histamine) due to the type of fish usually marketed (tuna and scombrid species).

A.6 CURRENT EC PROTOCOL

A.6.1 Main Features

The present protocol covers the period from 1 July 2001 to 30 June 2003, extended to 30 June 2005. The principal dispositions of the current protocol are:

- Fishing Possibilities**

Fishing Possibilities are made available mainly for Tuna vessels and a small segment for bottom longliners as per Table 45.

Table 45 - 2001/05 Protocol

Fishery		Catch Limitation	Max N° Vessels	Size Limitation	Licence fee€/ ^a	Min Licence fee €
Demersal Longline		w/l	4 vessels ^{/b}	630 GRT/mth (avg)	168/GRT/yr	
Tuna	Seiners	w/l	37 vessels	w/l	25/tonne caught	2,850/vessel/yr
	Pole and line	w/l	18 vessels	w/l	25/tonne caught	400/vessel/yr
	Longliners	w/l	62 vessels	w/l	25/tonne caught	2,100/vessel/yr

w/l - without limit but the protocol is structured around an annual reference catch of 7,000t ^{/a} The license fee is payable by the vessel operators ^{/b} max fishing simultaneously

- Financial contribution & Licensing**

Financial contribution is divided between “financial compensation proper” and funding for targeted actions. They both form part of total financial contribution. Total financial contribution is set at €680,000 per year, of which €400,000 (59%) is compensation proper and €280,000 (41%) for targeted actions.

Table 46 - Targeted Actions

Item	€
Scientific and technical programmes to promote better understanding of EEZ fisheries resources	50,000
Study and training awards in scientific, technical and economic disciplines relating to fisheries	20,000
International meetings & courses concerning fisheries	30,000
Development of quality control & MCS	180,000

In addition to financial contribution, vessel operators are required to pay license fees to the Government of Cape Verde. License fees are by capacity (GRT) for demersal vessels and by catch for Tuna seiners, surface longliners and pole & line vessels. The seiners and surface longliners must pay a threshold minimum value, equivalent to 110 tonnes and 80 tonnes of catch respectively. Should catches exceed these values then additional (per tonne) license fees are payable.

- **Obligations**

- **Timely payment**

Dates are stipulated for the payment of financial compensation and targeted actions by the EC, and provision made for the suspension of the agreement should these not be met. The deadlines for payment are detailed in Table 50, page 65.

- **Reporting on Targeted Actions**

The Ministry is bound to report in writing to the Commission within 3 months of the anniversary of the protocol on implementation of the protocol and results achieved. Provision is made for review of payments by the Commission in the light of actual implementation of measures (targeted actions).

A.6.1.1 Utilisation

The utilisation of licenses is detailed in the following table by fleet segment. Data obtained from the Commission and from DGP showed some minor differences and both are presented for comparative purposes. For the purposes of the ex-post evaluation the EC data on fleet deployment has been used throughout.

Table 47 - Utilisation of Licences

	2001/2002		2002/2003		2003/2004		Protocol	Avg Util	Dependency
Source	EC	DGP-CV	EC	DGP-CV	EC	DGP-CV			
Pole and Liners	12	12	17	17	16	16	18	83%	8.5% ^a
Freezer seiner	20	20	21	20	21	21	37	56%	0.4%
Surface longliner	60	62	59	59	44	43	62	88%	6.4%
Demersal longliner	1	0	0	0	0	0	4	8%	
Total	92	94	97	96	81	80	121	75%	

Source: Commission & DGP-CV ^{/a} Dependency in the pole and line segment is discussed further in Annex **Error! Reference source not found.**

Uptake of opportunities in general is high (75%). However, utilisation by the demersal longline segments is noticeably low. Utilisation of both surface longline and pole and line opportunities is high but with a significant fall in utilisation of surface longline opportunities in 2003/4 to 71% (EC data). Utilisation of Freezer Seiner opportunities (56%) is below the overall average utilisation, but consistent over the years.

Dependence on the fishing opportunities provided by the FA is estimated for each segment on the basis of the proportion of total annual catches for the vessels that take up licenses that are declared as from CV EEZ (detailed in Annex **Error! Reference source not found.**). It should be noted that estimates of dependency are particularly sensitive to the quality and reliability of declared catch data. In the freezer seiner segment dependency is particularly low, confirming the role of the agreement as part of a regional network giving tuna vessels the ability to follow seasonal migrations.

A.6.1.2 Elements of Contention

Commission

- **Flexibility of Allocation of Funds for Targeted Actions**

Although the protocol clearly gives autonomy to the GoCV in the choice of measures and allocation of annual amounts under the targeted actions programme there is still some perceived inflexibility in the system - The

GoCV will seek permission from the EC for approval of changes of allocations, implying not only delays whilst awaiting approvals but when approved there may then be changes to commitments between beneficiary accounts in GoCV and between budgets in DG Budget - both of which imply significant administrative complications for the Commission and subsequent delays in payments. The movement of funds between targeted activities is in reality a difficult and slow process.

GoCV

• **Provision of Catch Statistics**

The provision of **catch data** from the EU fleet has been inconsistent and unreliable and there is therefore no good basis for national fishery statistics. Most catch statistics are reported only once per year (the protocol specifies that data should be reported quarterly), and for 2003/4 DGP has only received catch logbooks for 21 vessels (26% of the currently licensed fleet), and of these 9 declared zero catch. For 2002/3 27% of the fleet submitted catch logbooks. Total catch declared to GoCV for 2002/3 was 762t. The government perceives that there is an implicit contradiction in the interest of the Community in renewal of the FA and the very low level of declared landings.

When catch statistics are returned by vessel owners, GoCV reports that in many cases either the standard ICCAT forms (as specified in the protocol) are not used or they are modified by ship owners.

• **Placing of On-board Observers**

GoCV reported that it has been difficult to place observers on board community vessels. This issue is questioned by the mission and discussed further in section A.1.1.

Cape Verde Private Sector

• **Landings for Local Processing Industry**

Both the GoCV and the processing industry are keen to see the EC dwf landing fish for the local processing industry. The protocol has provision that 5% of fish caught by the surface longline fleet (only) should be landed in Cape Verde *for transshipment*. This provision is considered deficient as

- i. there is no obligation to land for local processing,
- ii. 5% amounts to a quantity of product that is insignificant in industrial terms and
- iii. the landings of the surface longline fleet (mostly sharks) is not of interest to the local processing industry.

The provision in the protocol that “Community vessels shall wherever possible contribute towards supplying the Cape Verde canning factories” is considered ineffective and has resulted in zero landings for local processing in spite of formal communication from the GoCV to the Delegation of the EC setting out capacity and willingness of local processing industry to buy raw material from the EC tuna fleet.

A.6.1.3 Legal Aspects

Main elements of the FA that are in accordance with the current fisheries legislation:

Licences: are issued for each vessel and valid for a period of up to one year (one year for tuna vessels and surface longliners and three, six or twelve months for bottom longliners) in accordance to Art. 23° (Law Decree 17/87);

Reporting rules: these are generally in accordance to Art. 27° and Art. 28° (Decree 97/87);

Observers on board: generally in accordance to Art. 30° (Decree 97/87), except that the law requires ship-owners to take observers at ports chosen by the CV authorities and not by themselves;

Entry and leaving: obligation of communication generally in accordance to Art. 25 and Art. 26 (Decree 97/87), but the law requires communication every three days and not on a weekly basis.

Main elements of the FA that are not in accordance with the current fisheries legislation:

FA does not include revocation or suspension of fisheries licences for management reasons as prescribed by Art. 28° of Law Decree 17/87³⁶;

FA does not require list of crew members on board- the signing of seamen is regulated since 2000 and the law specifically provides for the existence on board of list of crew members signed by the master of the vessel and authenticated by the port authorities; according to Art. 31° of Law Decree 4/2000 no vessels are allowed to fish without this list on board³⁷;

FA does not include a liability clause of the Flag States for activities undertaken by vessels flying their flag which is expressly required by Art. 33° of Law Decree 17/87 with regard to international agreements³⁸;

FA is silent with regard to inspection and monitoring of the community vessels by CV officials³⁹;

FA subjects surveillance activities to previous notification (48 h) of the EU delegation which may limit their purpose.

It should be noted that according to the FA the Ministry responsible is free to decide on the measures and annual amounts allocated to the targeted actions. Annual amounts are made available, however, in accordance with the schedule for their use to be presented by the CV authorities. This seems to indicate that there is a legal entitlement to the annual payment, but disbursement requires previous presentation of the schedule for the use of targeted actions. Ex post evaluation is required through annual reporting by the Ministry responsible on the measures implemented and results achieved.

A.6.2 Financial Contribution

A.6.2.1 Application and Beneficiaries

The pure compensation (0.4m€/year), has benefited the ministry of Finance in keeping with the intention of the protocol. The payment of the contribution for targeted actions has also followed the provisions of the protocol and payments have been made directly from the Commission to accounts in DGP, INDP and the Coast Guard. The provision in the protocol that allows the use of multiple beneficiary accounts for targeted actions has limited the ability of both the Treasury, the Delegation and even DGP to monitor the status of financial contribution payments.

The application of revenues from financial contribution, as registered by the Treasury (a/c n°33103) is detailed in the following table.

³⁶ Art. 28/1: "Fishing licenses may be revoked or suspended for reasons of fisheries resources management".

³⁷ Art. 31/2: "Fishing vessels are not allowed to operate without a list of crew members on board".

³⁸ Art. 33: "International fisheries agreements shall respect the existing fisheries legislation and include provisions on individual licences, fishing zones and financial contributions as well as a liability clause of the Flag States for activities undertaken by vessels flying their flag".

³⁹ Chapter III of Law Decree 17/87 establishes the legal regime for fisheries surveillance defining authorised officers, their powers, which include the adoption of provisional measures, and responsibilities.

Table 48 - Application of Financial Contribution

For	€'000
INERF	292.1
Fisheries Week	30.6
INDP	105.5
Coast Guard	100.0
Equipment Mindelo Fisheries Complex	11.3
Equipment Mindelo Fisheries Complex	33.9
Training of inspectors	6.7
Laboratory Materials	25.7
CSRP	88.2
FDP	70.7
Technical meeting CV/Portugal	1.6
Travel expenses	0.6
Laboratory Consumables	38.6
Total	805.5

Source: DGT

Expenses incurred by institutions on the basis of direct payments from the EC (such as that to INDP) may not be registered in the above table, but it is however noted that the expenses incurred by the Coast Guard (€100,000) under targeted actions are in fact included.

Assuming that the expenditure made by INDP was for the scientific programme, the above table can be presented as follows against the targeted actions specified in the protocol.

Table 49 - Application against Targeted Action

Action	Total €'000	% of protocol allocation
Scientific programme	105.5	18.9%
Meetings	2.2	0.4%
QC & MCS	171.0	30.7%
Total	278.6	50.0%
Other (non targeted) ^{/a}	526.9	100%

Source: based in DGT data /^a Revenue from compensation proper applied

The total allocation of revenue to targeted actions (€278,600) is very close to the total allocation for targeted actions for one year (€280,000) as set out in the protocol, in spite of the fact that the total amount for targeted actions for the first year has not been completely disbursed by the EC (see below). Funds for targeted actions for the second and third years of the protocol are yet to be disbursed by the EC.

It should be noted that the monies applied in the sector (€805,500

Table 48) is greater than disbursements of funds for targeted actions (€330,000 Table 50) indicating that monies for financial compensation proper have been spent in the fisheries sector. However, the difference between the total allocation of financial contribution funds (€805,500) and the total disbursement of financial contribution by the EC (€1,530,000) indicates that either monies remain available in the treasury or part pure compensation revenue has been applied out side of the sector. The latter is of course permissible under the terms of the protocol.

A.6.2.2 Payment Schedule

The payments of financial contribution due by the time of this study are detailed below, together with the actual dates of payment. In addition to that detailed in the table, financial contribution is also due for payment on 30/6/04 for the one year extension of the current protocol.

Delays in the payment for targeted actions is due in part to changes in destination accounts and the bureaucracy associated with i. the collection and sending of account details by the CV authorities and ii. the approval of these accounts by the Commission. In addition to this, changes in Ministry of Finance have required new counterpart accounts for the payment of compensation proper.

Table 50 - Payment of Financial Contribution

For	Period	Value (€)	Due Date	Value Paid	Date Paid	Balance
Financial Compensation	2001-2002	400,000	31/1/02	400,000	6/2/02	0
Targeted Actions (Total)	2001-2002	280,000	31/1/02	253,721		26,279
Sci&Tech Prog		50,000		50,000	9/10/02	0
Training		20,000		3,721	28/5/02 ^a	16,279
Internat Meetings		30,000		20,000	28/5/02, 6/2/03	10,000
QC & Surveillance		180,000		180,000	7/2/03	0
			Totals	653,721		26,279
Financial Compensation	2002-2003	400,000	30/6/02	400,000	11/6/02	0
Targeted Actions (Total)	2002-2003	280,000	30/6/02	76,279		203,721
Sci&Tech Prog		50,000		50,000	28/5/04	0
Training		20,000		26,279	6/2/03 ^a	-6,279
Internat Meetings		30,000				30,000
QC & Surveillance		180,000				180,000
			Totals	476,279		203,721
Financial Compensation	2003-2004	400,000	30/6/03	400,000	18/8/03	0
Targeted Actions (Total)	2003-2004	280,000	30/6/03			280,000
Sci&Tech Prog		50,000				50,000
Training		20,000				20,000
Internat Meetings		30,000				30,000
QC & Surveillance		180,000				180,000
			Totals	400,000		280,000
Total (€)		2,040,000		1,530,000		510,000

Source: EC ^a Allocation of the disbursements between 1st and 2nd years of the protocol is unclear from EC data.

It is of note that the funding of targeted actions is made on the basis of individual requests and the total amount is not advanced to the GoCV for later justification via the reporting process. This, coupled with the fact that there are several different beneficiary institutions (and accounts), has implied administrative delays and impeded the implementation of targeted actions.

Although the delegation reported that a good dialogue has been established with the relevant ministries, payments of financial contribution are still delayed. €510,000 is still be payable for targeted actions, excluding amounts that fall payable on 30 June 2004 (totalling €680,000) for the one year extension of the protocol.

The Commission reports⁴⁰ that in August of 2004 it is about to launch the payment of the 2nd and 3rd instalments of payment for targeted actions and attributes late payment as “due to delays from the Cape Verde

⁴⁰ The Commission's comments to the Draft Final Report on Cape Verde, August 2004

Administration". CV authorities for their part attribute delay to the complicated process for approval of accounts. Whatever the case, the payment of the 3rd and 2nd instalments of contribution allocated for targeted actions will be over one and two years late respectively.

A.6.3 Catches/Impacts

The catches attributable to EU vessels fishing under the EU-Cape Verde Fisheries Agreement are shown in Table 51. These only account for information received from 2000 to 2002, with no data declared for the longline fleet in 2001. Catches disaggregated by species refer only to 2002.

Total declared catches in the EEZ of Cape Verde have been 1,073 t in 2000, with pole and line vessels accounting for about 56% of the total and longliners 39%. In 2002 total catch was 1,865 t (with longliners having a share of 82% of the total catch, pole and line vessels 6.5% and seiners 11.5%). Total catch in 2002 disaggregated by species indicated a share of 8.8% of skipjack, 9.1% of Bigeye, 0.8% of Yellowfin, 54.2% of Sharks (with blue sharks representing around 46%), Marlin 0.1%, Swordfish 8.1%, Sailfish 6.3% and others 12.6%.

The longline fleet with 1,528 t declared in 2002 show an important shark catch share of around 66.2% with blue sharks representing around 56%, while Yellowfin was 0.9%, Marlin 0.1%, Swordfish 9.9%, Sailfish 7.7% and others 15.3%.

Table 51 - Summary of EU Declared catches.

Year	Species	Longline	Pole & Line	Seiners	Total
2000 ¹	Total	417	600	56	1,073
2001 ¹	Total	N/a²	0	374	374
2002	Skipjack		51	113	164
	Bigeye	13	57	100	180
	Yellowfin		14		14
	Hammerhead sharks	25			25
	Silky shark / Great White shark	10			10
	Marlin	2			2
	Mako shark / Porbeagle shark	121			121
	Swordfish	151			151
	Sailfish	118			118
	Blue shark	855			855
	Others	234		1	235
2002	Total	1,529	122	214	1,865

Source: DG Fish

¹ Declared catches are not disaggregated by species ² No information received on declared catches from Spanish longline fleet

EU catches under the Cape Verde fisheries agreement in the EEZ account for 0.02% of Yellowfin, 0.33% of Skipjack, 1% of Bigeye and 3.2% of swordfish of total EU catch in all ICCAT area as shown by the following table.

Table 52 – Catch of EU vessels in Cape Verde EEZ and all ICCAT

Area	EU catch in Cape Verde EEZ		Catches by all nations in ICCAT area (t)	
Species	2002		2001	
	Tonnes	% of all ICCAT	Total	EU
Yellowfin	14	0.01	157,269	63,824
Skipjack (East Atlantic)	164	0.15	109,897	49,714
Bigeye	170	0.18	96,482	16,476
Swordfish	151	1.54	9,797	4,782

- Impacts of tuna purse seining and pole and line fleets**

The EU tuna fleet, being mainly focused on yellowfin and skipjack, has little impact on the overall levels of exploitation of the tuna species within the Cape Verdean EEZ. The resource impacts are therefore

determined by the status of the skipjack stock within the ICCAT region. As indicated, Cape Verde appears to straddle the Eastern and Western skipjack stock. More recent considerations suggest that skipjack stocks may be even more highly localised. Additional research on the Eastern stock is currently underway. There are some concerns associated with fishing using FADs and the EU Fleet is subject to an ICCAT restriction on the use of FADs in equatorial waters. However it would appear that current patterns and levels of EU fishing effort using pole and line and purse seine gears within the Cape Verde EEZ will have no long term impacts on the sustainability of the Atlantic tuna resources.

- **Impacts of longline fishing**

In the first instance the fisheries and environmental impacts of the agreement will depend upon the extent to which the fishing opportunities are taken up in practice. Detailed analysis of the uptake of fishing licence opportunities in the Cape Verdean waters is shown in Table 47. Fishers of the migratory fish stocks which are the subject of this agreement will frequently take up licence opportunities throughout a region, allowing them flexibility to exploit the fishery in the EEZs of several nations. It is therefore important to note that dependency of the fleet on the fishing opportunities is low and reported data indicates that catches in CV waters account for an estimated 6.4% of fleet catch. The activity level of the EU surface longline fleet in the Cape Verdean EEZ for 2002 is shown in Table 53. Out of 62 long line fishing licences issued (and assuming full reporting of activity and catches) 34 appear not to have been used at all. Of the remainder, 28 vessels fished in Cape Verde waters for 4 months or less.

Table 53 : Monthly activity (with reported catches) of EU - Spain longliners fleet, 2002

EU-Spain fleet	Number of months fishing										
	0	1	2	3	4	5	6	7	8	9	>10
Number of longliners with reported catches	34	7	8	8	5	1	1	0	1	1	0

Nevertheless, research published in 2000 has shown the area around the Cape Verde islands to be one of the worlds main longline hotspots for density of fishing effort. The EU surface longline fleet in the Cape Verde EEZ targets the swordfish, which in 2002 accounted for 151 tonnes (1.5%) out of the estimated 9,800 tonne catch in the North Atlantic. Anecdotal evidence, and the only partial uptake of the fishing opportunities, suggests that the level of catches is largely limited by the abundance of the resource rather than the fishing opportunities provided by the agreement.

However, the shark catch of this fleet in Cape Verdean waters is estimated to be 855 tonnes of blue shark and 121 tonnes of short fin mako. Given the lack of stock assessment data, it is not possible to directly assess the significance of these quantities on the long term sustainability of the populations of these species. Given the reported decline in abundance of blue shark based on long line surveys in other regions of the Atlantic, there is a good case at this stage for a precautionary approach which aims to jointly reduce the impact of long line fishing in the Cape Verdean waters on this species, and to improve the data on the fishery. It should also be noted that swordfish catches were much higher in 1999 and 2000 (538 and 209 tonnes) suggesting correspondingly higher levels of shark catches in these years (assuming the same by catch rates). This would suggest that levels of surface longline fishing opportunity offered by the current protocol can result in catches of blue shark and mako shark of up to 3,046 and 431 tonnes respectively.

Furthermore, of considerable concern, is the impact of surface longliners on the loggerhead and leatherback turtle populations. There is evidence that Atlantic populations are more susceptible to by-catch mortality, and that surface longlines targeting swordfish, as do the EU vessels, result in an increase in by catch (section A.3.2.1).

B EVALUATION

B.1 GENERAL

B.1.1 SWOT Analysis of the fishery sector

Strengths	Weaknesses	Opportunities	Threats
Resources			
<p>Very local fishing grounds</p> <p>Good tuna resources (on basis of published research)</p> <p>Good coastal small pelagic resources (only for artisanal fisheries)</p> <p>Coastal demersal resource over 300m unexploited</p> <p>Archipelago situated on tuna migratory route</p> <p>Good lobster resources (only accessible to national vessels)</p>	<p>Decrease in coastal resources</p> <p>Very limited continental shelf</p> <p>Apparently limited coastal demersal resources</p> <p>Inadequate or untimely coastal resources of juveniles for livebait fishery</p>	<p>Experimental fishery for deepwater demersals (such as black scabbard, deep water crabs)</p>	<p>Over exploitation of oceanic sharks by surface longliners</p> <p>Catch of critically endangered turtles as surface longline by-catch</p> <p>Localised over exploitation of lobster resource (use of SCUBA)</p> <p>Destructive fishing practices incl dynamite</p> <p>Potential artisanal fishery conflicts with tourism</p>
Institutional Framework			
<p>Various current initiatives to update policy (FAO, Resource management plan)</p> <p>Key institutions for support to sector exist, incl INDP and National Fisheries Council (with representation of all stakeholders)</p> <p>BSc training course exists in C-Verde, good links with international fisheries research institutions training institutions for fishers (fisheries, technical, mechanical)</p> <p>Vessels and plane available and operational for MCS</p> <p>Vessel available for research</p> <p>Established structure of incentives for investment (incl duty free status)</p> <p>International fishing agreements facilitate continuous operation of national fleet</p> <p>Adequate human capital for development</p> <p>Key legal principle: any use of marine resources is subject to management plans</p>	<p>Weak statement of national fisheries policy</p> <p>Unclear division of roles between DGP and INDP, handicapped by lack of local representations outside Santiago</p> <p>Weak relationship and dialogue between private sector and fisheries administration</p> <p>Lack of finance to make surveillance, directly related to disbursement of FA financial contribution</p> <p>No currently implemented satellite VMS or experience</p> <p>Non functional observer program, in spite favourable conditions</p> <p>Weak fisheries research and stock assessment</p> <p><i>Limited knowledge of coastal demersal resources</i></p> <p>Estimates of large pelagic resources potentially outdated</p> <p>Lack of any evaluation of oceanic shark resources</p> <p>Only 3 masters degree graduates in INDP</p> <p>Difficult access to credit</p>	<p>Operational pattern of vessels well suited to observer programme</p> <p>Development of fisheries management and knowledge through international links (existing) and projects</p> <p>Approval and publication of fisheries strategy and policy</p> <p>Improved use of public fisheries research and data (ICCAT)</p> <p>Adoption of specific regulations prescribed by FL (e.g. beach seining, closed areas, logbooks, etc)</p> <p>Implementation of efficient MCS in accordance with general obligation established by FL</p> <p>Establishment of EEZ Surveillance Fund</p> <p>International and regional cooperation required by law</p>	<p>Continued delays in payments of financial contribution for targeted actions</p> <p>Loss of qualified human resources due to low motivation.</p> <p>Continued delay in repair of research vessel making the vessel unrepairable</p> <p>Lack of enforcement power/capacity/authority</p> <p>Sanctions outdated/not severe/ineffective in securing compliance</p> <p>International/regional legal and policy developments not reflected in national legal framework</p>

Strengths	Weaknesses	Opportunities	Threats
<p>Express prohibition of water pollution or any activities that may affect the marine environment</p> <p>Fishing related activities inc. transshipment regulated by law</p> <p>Marking and identification rules in accordance with FAO standards</p> <p>Evidentiary provisions- presumptions of fact and law included</p>	<p>financing</p> <p>Lack of implementation & enforcement of environmental policy</p> <p>Low public environmental awareness</p> <p>Fisheries law (FL) outdated and inadequately regulated</p> <p>Infraction scheme established by FL and not reviewed since 1992</p> <p>Closed season established by FL without link to resources management/conservation (not reviewed since 1987)</p> <p>Authorised officers from maritime authorities and economic/fiscal police – inspection power not granted to fisheries observers/officers</p> <p>Minister is the competent authority to fix high penalties and accessory sanctions</p>		
Fishing			
<p><i>Demersal fishery only to 300m and limited to small scale fishing fleet</i></p> <p>Existence of small industrial sector</p> <p>Industrial fleet renewal in process</p> <p>Mostly motorised artisanal fleet</p> <p>National canning industry</p> <p>Good port services and conditions, reasonably priced</p> <p>Shipyard for vessels to 110m</p> <p>Artisanal fishing ports to be built in Santiago, Santo Antao</p> <p>New cold storage at Praia fishing harbour</p> <p>Adequate and subsidised ice for industrial fisheries</p> <p>Many opportunities for local crew on EC vessels</p> <p>Adequately trained and experienced crew available</p>	<p>Technically and institutionally confused process of industrial fleet renewal</p> <p>Migratory nature of resource implies vessels must participate in foreign fisheries to maintain activity all year.</p> <p>High local fuel price</p> <p>Incapacity to fully exploit tuna fisheries with national fleet</p> <p>Majority of vessels in the CV industrial fleet old and outdated</p> <p>Vessels unequipped for deepwater fishing</p> <p>Very limited cold storage (150t) with EC license in Sao Vicente</p>	<p>Continued fleet modernisation and diversification</p> <p>New industrial vessels based on fresh product and limited autonomy</p> <p>Increased supply to national canning industry</p> <p>Privatisation and rehabilitation of INTERBASE cold storage (4500t)</p> <p>Development of mariculture production</p>	<p>Dynamite fishing</p> <p>Continued deterioration of INTERBASE.</p> <p>Delayed or halted privatisation of INTERBASE</p>

Strengths	Weaknesses	Opportunities	Threats
Marketing			
<i>Geographically well positioned for EC market</i> Approved competent authority Some local markets with good hygienic conditions	Weak internal marketing and distribution problems associated with island state Only 2 companies approved for EC market.	Ethnic markets in US and EC Production of new products with higher added value from large pelagics Niche markets in EC/US, on basis of existing market penetration Inconsistent supply of raw material from national fleet alone, resulting in unsatisfied demand for raw material by national processors	Difficulty of competition on open market on the basis of “normal” products from Asia Rehabilitation of INTERBASE

B.2 EX-POST EVALUATION

This section focuses on the formal ex-post evaluation of the FA on the basis of indicators and evaluation questions developed under the study by Oceanic Developpement (2003). The analysis is essentially retrospective, but forward looking elements have been included where relevant. For each of the key evaluation questions information has been presented (when relevant) from three perspectives: that of the Community as a whole, that of Cape Verde and that of promotion of responsible fisheries. It must be noted that the quantitative indicators calculated in the following analysis will have been influenced by any under declaration or non declaration of catch. Both benefits and costs per tonne may be significant over-estimates. An extensive impact evaluation table is presented in Annex **Error! Reference source not found.**, and the basis for the calculations of costs, benefits and value added is detailed in Annex **Error! Reference source not found.**

B.2.1 Effectiveness

- **Community Fisheries**

Contribution of the FA to the presence of the Community in the Distant Water Fisheries

The FA has permitted the licensing of an average of 90 community vessels per year over the current protocol. In addition to the vessels indicated in Table 54, EC records indicate that a demersal longliner was also deployed for the first year of the protocol, although this is not reflected in GoCV data, nor is there any catch data available.

Table 54 - Deployment and dependency

Segment	Surface Longline	Seiners	Pole&Line	Total
N ^o vessels	54.3	20.7	15	90
Dependency ⁴¹	6.4%	0.4%	35%/a	

Source: EC

Estimates of dependency on the FA in the surface longline and freezer seiner segments of the fleet are low on account of low reported catches. This is discussed in section A.6.1.

Contribution of the FA to employment and value added in the Community fisheries sector

The FA has secured direct employment (FTE, allowing for dependency) for 21 Community crew posts and a further 116 downstream and 69 upstream jobs.

Table 55 - FTE Employment

Segment	Surface Longline	Seiners	Pole&Line	Total
EC Crew	21	1	32	53
Upstream EC Jobs	69	2	105	176
Downstream EC Jobs	14	17	49	80
Total EC Employment	104	20	185	310

Source: Annex **Error! Reference source not found.**

Community value added attributable to the FA is estimated to be 3.02m€ per year, implying that for each Euro invested in the Fisheries Agreement, 4.0€ has been generated in Community value added.

⁴¹ Dependencies calculated on basis of EC catch for CV waters as % of fleet segment total annual catch, with the exception of /a which is calculated on basis of data obtained from vessel operators. Dependency for this segment on the basis of EC catch data is 8.5% but covers only one year of the protocol.

Table 56 - Community Value Added

m€	Surface Longline	Seiners	Pole&Line	Total
Direct VA	0.784	0.052	0.538	1.374
Upstream VA	0.944	0.058	0.159	1.161
Downstream VA	0.075	0.138	0.271	0.484
Total Community VA	1.803	0.249	0.967	3.020

Source: Annex **Error! Reference source not found.**

Contribution of the FA to the stabilisation of the European market

Reported data for tuna from the EC fleet indicates a total catch of around 400t per year (all segments) which is small relative to the EC market and will not have had any appreciable impact on price stabilisation.

- **Cape Verde Fisheries**

Contribution of the FA to the development of the fisheries industry of the partner country

Ports, markets and other infrastructures

The contribution of the FA to the development of ports, markets and other infrastructure was practically none, apart from equipment supplied to the new fishing port infrastructure of Mindelo (S.Vicente) related with sanitary requirements.

There has been an effective development of infrastructure in terms of fishing ports in S.Vicente and Praia but all mainly related to Japanese funding. Vessel repairs infrastructure has also been developed and there is now a very modern structure with capacity to receive large dimension vessels (up to 110m length and 18m wide), but with no FA funding. National market infrastructure has also been developed in some islands with reference to good hygiene and health conditions for handling fish.

However the FA has contributed substantially in providing funds towards the purchase of necessary laboratory equipment and the training of inspection staff who work with the Competent Authority which has led to the upgrading of fish product hygiene and the approval of the Competent Authority for export markets of fish products in the EU. This in turn has led to an increase in the activities of the fish industry. Cooperation funding was also given from Portugal which supported other necessary inputs of laboratory technical assistance and equipment.

There is insufficient appropriate cold storage infrastructure available to the sector. This is considered to be one of the main needs for the development of the sector. Enhancing capacity is expected to support of the national fleet landings, provide an incentive for eventual landings by foreign fleets, support the further development of the processing industry, and increase the capacity of the distribution and commercialisation systems.

Manpower / employment

The FA protocol identifies only a very marginal number in regard to possible employment within the European fleet (13 crewmembers in total). In practise the recruitment of Cape Verdeans for the EU fleet is surprisingly high, reaching an estimated average of 3.5 crew members for each longliner with an average income of € 700/month. The jobs reflect not only normal crew fishers, but also deck masters and second engineers, therefore offering more valuable salaries.

In total this provides about 120 jobs/year attributable to the FA, distributed amongst about 70 vessels, comprising a total income of €1,019,000. The benefit to the country is significant representing more than the overall financial contribution given by the FA, thus:

- the associated poverty alleviation of several families;
- the improvement of human capital;
- the possible increase of social capital;

- the exports of manpower;
- an increasing potential for more entries to the workforce not only to the FA fleet but also to other EU fleet as already happens.

In addition Cape Verdean fishers are known to work in several fleet sectors in the EU domestic fleet. For example the Azores pole and line fleet also employs some 170 on a seasonal basis. Fishery sector employment linked to EU fisheries is therefore considerably more important than the direct impact of the FA would suggest.

It should be noted that only an estimated 50% of crew jobs held by Cape Verdeans on EU vessels are attributable to the Fisheries Agreement - if the agreement were to terminate, some Cape Verde Fishers would continue to be employed on EU vessels.

Commercialisation sector

There is no real contribution of FA to the commercial sector. There are no supplies or any support relating to the distribution of fish products in and between islands.

Processing sector

The FA protocol defines that there should be a transshipment of 5% of surface longliners catch and that tuna vessels should make effort to supply local processing industry. Although this level of transshipment is considered to be achieved, these provisions have resulted in no interaction between the EU fleet and the processing industry in Cape Verde. There has been no supplying of tuna to the local processing industry from the EC fleet.

In this respect the Cape Verdean canning industry reports seeking to purchase supplies of tuna raw material at international prices from EU sources, but with no result. In fact this is seen as an important input which could be significant for the development of the processing industry.

It should be noted that the catch of tuna species from the surface longliners is very small (with tuna species representing about 1% of the total catch). This fleet segment is therefore not capable of supplying significant quantities of raw material in a consistent manner to the domestic canning sector.

The FA has contributed positively to development of quality control facilities and procedures. DGP estimates that up to 80% of all quality control related costs (including training) are funded from financial contribution revenue.

Contribution of the FA to the management and institutional strengthening of the domestic support structures for the fishery sector

The targeted actions program has supported institutional strengthening through the funding of studies and participation in seminars and meetings. The degree of support however has been very limited, principally due to the delayed payment of financial contribution (both compensation proper and targeted actions) as discussed in section A.6.2.2, and the fact that in the original allocation of funds under targeted actions, few resources were focused on management and instructional strengthening.

The FA has contributed to fisheries research in INDP through the targeted actions program. It should be noted that research and management for Atlantic tunas is focussed through ICCAT and the research supported by the FA has been mainly directed to stock assessment of coastal resources (lobsters and small pelagics) not having any impact on the fisheries of the EU fleet.

Impact of the FA on food security

The FA has not contributed towards any improvement of the supply of fish products for the domestic market, or to foreign exchange earnings which might allow the import substitution of protein sources. There is no positive impact on food security.

Although the FA competes with the national fleet in respect to fishing tuna resources, studies undertaken in 1996 identify a catch potential of about 25,000t, well above national and foreign fleet catches (although the

catch records of the EU fleet is imprecise). The operation of the EU fleet is therefore not considered to be a threat to the availability of fish for local consumption.

Overall therefore the FA has had a neutral impact on the food security situation in Cape Verde.

Contribution of the FA towards overall poverty reduction in Cape Verde

The FA contributes significantly towards **employment** of manpower as crewmembers of the EU fleet, which is an important source of income. Salaries received are also significantly higher than those established by the national industrial fleet. Therefore there is an important contribution for one of the main associated problems of poverty – unemployment - which is presently at an overall national rate of 22%, increasing to a rate of 33% amongst the poor.

A relatively small amount of revenue from the FA financial contribution has contributed to FDP's programme to support (subsidise) **credit for investment** in outboard motors for small-scale open-deck vessels. This credit is seen as a relatively positive impact amongst the artisanal fishers in remote communities where poverty is widespread.

The fisheries sector is specifically mentioned in poverty reduction strategies and is considered in one of the five options of the National Development Plan of Cape Verde 2002-2005, although the FA does not give any contribution whatsoever for this purpose. The direct contribution of the FA towards overall poverty reduction through specific budgets for funding pro-poor initiatives is non-existent. Overall the contribution of the FA to poverty reduction is considered to be extremely limited.

- **Promotion of Responsible Fishing**

Contribution of the FA to the implementation of responsible fishing practices in Cape Verde

The FA has contributed towards the cost of 2 **surveillance missions** of 10-12 days each during the life of the protocol, funded directly through revenue allocated from the targeted actions.. These activities integrated the effort of one ship and one aircraft, having on board one inspector from both DGP and INDP. Although the Commission has agreed to co-finance the installation of a satellite based VMS system, this is not as part of compensation under the current protocol.

Over the life of the protocol, there has been no provision of consistent and reliable **catch data** from the EU fleet on which to base further fishery statistics⁴² and stock assessment developments, including data on by-catch of fish, seabirds, marine mammals and turtles. Catch data reported to the EU Delegation and sent to the Cape Verdean Authorities does not match with the data reported to the Commission by member states. In addition data seems considerably under-reported in respect to reports sent to ICCAT. In this respect the FA cannot therefore be considered to have contributed to the implementation of responsible fishing practices in the partner country.

The FA has also, through its target actions program, given support for the activities of the **research** institution INDP, although research has been mainly directed to stock assessment of coastal resources (lobsters and small pelagics) not having any impact on the fisheries of the EU fleet.

B.2.2 Efficiency

- **Community Fishers**

Cost of the fishing possibilities negotiated under the FA fair for the Community

Modelled projections for the full use of fishing possibilities negotiated under the FA (based on actual dependencies and declared catch rates) would have resulted in a projected catch of 2,800t (all segments).

⁴² For 2003/4 DGP has only received catch logbooks for 21 vessels (26% of the fleet), and of these 9 declared zero catch. For 2002/3 27% of the fleet submitted catch logbooks.

Actual utilisation resulted in an estimated catch of 2,300t. Both of these are considerably below the reference catch of 7,000 tonnes per year stated in the protocol.

Table 57 - Cost of fishing possibilities

	Protocol Reference	Projected Full Utilisation	Actual	
Catch	7,000	2,826	2,297	t/yr
Catch Value	13,028,000/ ^a	5,259,145	4,395,298	€/yr
Financial contribution ⁴³	680,000	680,000	680,000	€/yr
Total Cost	108	268	330	€/t
as % of value	6%	14%	17%	

^{/a} estimated based on average price at projected full utilisation

Under utilisation of opportunities has resulted in the community paying 23% more financial contribution per tonne than would have been expected under full utilisation. Low dependency on the protocol, together with underutilisation of opportunities has resulted in actual catches being about one third of the reference catch in the protocol. Community costs per tonne are thus about three times those implied under full usage of the protocol up to the reference tonnage.

Cost / advantage ratio of the FA in terms of support to the Community fishing sector

The cost advantage ratio for the community at 4.0 is 17% lower than that implied by the negotiated conditions. It should be noted however that even the cost advantage achieved is very high.

Table 58 - Community Cost Advantage

m€	Full Utilisation	Actual
Total EC VA	3,664	3,019
Financial contribution ⁴³	0.680	0.680
Cost/Advantage	4.8	4.0

Cost Advantage (attractiveness) for ship owners

The access costs (license fees) paid by Community ship owners operating under the FA are several orders of magnitude more expensive than official costs of locally obtained licenses, reflecting amongst others the fact that local license rates do not differentiate between foreign and national vessels and that rates have not been updated since 1987. In practise DGP does not issue licenses to individual foreign vessel operators, preferring to stay within bilateral agreements. The only way that EC operators could get access would be through a fisheries agreement.

Table 59 - License Fees

	Licence fee€	Min Licence fee €	Local licence fee €
Demersal longline	168/GRT/yr		3/vessel/yr
Tuna seine	25/tonne caught	2,850/vessel/yr	36/vessel/yr
Tuna pole & Line	25/tonne caught	400/vessel/yr	4/vessel/yr
Surface Longline	25/tonne caught	2,100/vessel/yr	46/vessel/yr

The exception to this is an agreement with a Japanese company (note that it is not a bilateral agreement between governments) that allows longliners to fish in Cape Verde waters at a fixed cost of €6,700 (\$8,000) per vessel per 6 month season. In the context of this, access costs via the current FA are very advantageous for EC ship owners.

⁴³ Financial compensation plus targeted actions. Although at the time of field work 30% of the total financial contribution due was in arrears (section A.6.2.2), throughout the ex-post analysis financial contribution is modelled at the full protocol value, i.e. as if it were fully paid up.

The license fees paid are detailed by EC operators in each segment in the following table. It is noteworthy that the seiners appear to pay a very high price compared to declared catch, either indicating catch under declaration or the fact that it is worth the operators paying the minimum fee to ensure access to Cape Verde waters should significant stocks migrate through the area for that year.

Table 60 - License fees paid

Segment	Surface Longline	Seiners	Pole&Line	Total
License Fees €	114,100	58,900	6,000	179,000
per tonne caught €/t	75.9	219.5	11.4	77.9
as % of catch value	4%	21%	1%	4%

The rate of utilisation of possibilities is high for pole & line vessels and surface longliners (>80%), indicating that the fishery remains attractive for ship owners. However the almost total absence of declared catches for the pole and line segment (and the implication that absolutely no catch was made for the first year of the protocol) is contradictory to such high utilisation. Uptake of tuna seiner possibilities has been consistently lower, and there has been no uptake of bottom longline possibilities. On a year by year basis overall utilisation dropped from 77-80% in the first two years of the agreement to 67% in 2003/4 primarily due to a reduction in the demand for surface longline licenses:

Table 61 - Utilisation

Utilisation	2001/2	2002/3	2003/4	FA Possibility	Average Utilisation
Tuna Pole & Line	12	17	16	18	83%
Tuna Seine	20	21	21	37	56%
Surface longline	60	59	44	62	88%
Bottom longline	1	0	0	4	8%
Annual Utilisation	77%	80%	67%		

Source: EC

The FA opens the possibility of EC vessels supplying national tuna processing industry, but to date there have been no landings of tuna in Cape Verde from the EC fleet, other than for transshipment. Reported prices are as follows:

Table 62 - Typical Prices

Species	CV Processing industry €/tonne	Typical EC Price €/tonne	Difference
Yellowfin	730-1100	980	-25% to +12%
Skipjack	270-500	750	-64% to -33%

Sources: CV private sector

In general there would appear to be a significant price disadvantage for EC vessel owners to sell in Cape Verde. However it should be noted that the local processing industry is at times obliged to import raw material (at a cost significantly above the local buying price) and therefore there are periods when the industry pays a competitive international price for product. Although in some cases longer standing contractual commitments between vessels and EC processors may prevent them making use of such short term market opportunities, element of particular segments (such as French seiners) are more dynamic in their marketing and may be able to take advantage of such opportunities.

• **Investment in Development / Cape Verde Fisheries**

Cost Advantage for Cape Verde

Estimates of cost advantage for Cape Verde in terms of total benefits compared to catch value are presented in the following table. GoCV rent is defined as financial contribution plus licence fees and total economic rent includes local value added:

Table 63 - Cape Verde Rents

	Full Utilisation	Actual
GoCV rent	18%	20%
Total economic rent	42%	45%

The rent accruing to the government (20%) is considered to be much higher than would accrue to the government if the resource were exploited by a national fleet. A recent study by FAO⁴⁴ indicates rents accruing to the government in the order of 9% of landed value.

It is notable that the license fee paid by the different segments does not reflect the value of product. This is especially true for the Surface Longliners who target higher value species but pay the same fees as other tuna segments:

Benefit from the conditions of utilisation of financial contribution to sector development & institutional strengthening

The conditions of utilisation of the financial contribution and the presence of Targeted Actions in the protocol have helped to secure revenue for the fisheries administration. Payments have been made directed directly into accounts of INDP and the coastguard (in progress) to ensure compliance with the specific terms of the protocol. The protocol allows the Ministry responsible for fisheries to stipulate the accounts where funds for targeted actions should be paid and this practise has effectively circumvented delays in disbursement of funds channelled through the treasury.

There are however costs associated with this practise, namely:

- i. Direct payments made by the EC to institutions that are not the treasury are off budget. In principle funds may become on-budget via the reconciled accounts, but not only is there increased risk in the management of such funds but also there are delays of several years in the compilation and approval of reconciled annual accounts;
- ii. Direct payments are made to institutions enter into commercial banks and the BoCV loses the foreign exchange benefit from the FA;
- iii. The use of different accounts for different payments of financial contribution for targeted actions has contributed to administrative delays.

It is worth noting that the payments made through the Treasury (of both financial compensation and for targeted actions) are maintained in an individual account which is essentially ring fenced for use within the sector. The existence of targeted actions in the protocol is therefore in principle unnecessary, although it does ensure pre-allocation of funding to particular measures and facilitates access to funds.

Contribution of financial compensation to GDP, and poverty alleviation

National GDP is estimated at €0.74bn (2003) of which fisheries contributed 2% or €15million. The financial contribution of the current FA is thus equivalent to 4.5% of the contribution of fisheries to GDP and 0.1% of total GDP.

⁴⁴ Wilson J.D.K. "Fiscal Arrangements in the Tanzanian Fisheries Sector", FAO Fisheries Division Internal Report, 10/2003

The low rate of disbursement mentioned above will have implied that the real contribution of the FA to GDP is significantly (30%) below this value, although in principle the money should be paid to Cape Verde eventually.

- **Promotion of Responsible Fishing**

Benefit from the conditions of utilisation of financial contribution to responsible fishing

There is a clear link between the conditions of utilisation and the promotion of responsible fishing in that part of the financial contribution has been directed specifically at making surveillance missions. The benefit is considered small - only 2 missions have been made since 2001 on account of low disbursement - and there are costs associated with accountability of the monies for targeted actions, as referred above.

B.2.3 Relevance

- **Community Fishers**

Does the FA satisfy the needs of the local target groups in the Community?

Utilisation of the FA indicates that the current protocol satisfies the needs of community fishers, to the extent of providing opportunities which are in excess of community needs. The exact relevance of the agreement to particular segments is questioned, especially for surface longliners. Data and interviews indicate that the fleet targets swordfish and shark, whereas the intention of the fisheries agreement is clearly focussed on only resources of tuna-like species. As the agreement stands it is obscuring the real intention of the segment.

The relevance and utility of the FA goes beyond direct utilisation as it forms part of a network of agreements in the region that allow the EC fleet to follow highly migratory species. As mentioned earlier the agreement will therefore have utility (especially for seiners) even though catches in the EEZ may be low.

- **Investment in Development / Cape Verde Fishers**

Does the FA satisfy the needs of the local target groups?

The FA is perceived as being generally unsatisfactory amongst the different local target groups, although some positive points are accepted. Evaluation of satisfaction can be summarised as follows in relation to the main issues considered by target groups:

<i>Main issues expressed</i>	<i>Degree of Satisfaction</i>	<i>Justification</i>
Employment in EU fishing fleet	Very Satisfactory	Actual employment surpasses protocol conditions and contributes positively to livelihoods
Local Industry Value Added	Unsatisfactory	Very limited interaction with local industry, especially fish processing which lacks raw material
Promoting national private investment	Very Unsatisfactory	No increased investment due to the FA
Commercial interactions with national companies / markets	Unsatisfactory	No commercial benefits from the presence of the EC DWF
FA financial contribution	Unsatisfactory	Delayed payment of financial contribution (detailed in section A.6.2.2), but inclusion of targeted actions useful for securing finance.
Compliance with FA	Partially unsatisfactory	Poor submission of catch statistics
FA conditions	Unsatisfactory	Bait fishing in CV waters, Transshipment of 5% brings no economic benefit
Macro-economic benefits to Cape Verde	Unsatisfactory	Part of compensation paid to commercial bank a/c's, with no foreign exchange benefit to BoCV and increased risk of revenue falling off budget.

Fairness of the cost of fishing possibilities

The cost advantage calculations above indicate that the GoCV receives approximately twice the value that it might expect to receive from the fishery should it be exploited only by a national fleet. The gross economic benefit (45%) is however considerably less than that which would be expected under national exploitation.

Equitable distribution of Value added generated between the EC and the country

Total value added associated with the FA is 5.00m€ per year, of which 60% (3.02m€) is attributable to the EC and 40% (1.98m€) to Cabo Verde. This distribution is not considered excessively inequitable especially in the context of the one sided distribution of investment.

- **Promotion of Responsible Fishing**

Suitability of the Community fleet for sustainable fishing

See below

B.2.4 Sustainability

Does the FA contribute to sustainable exploitation of fishing stocks

FA does not contribute towards sustainable exploitation of the fishing stocks under target and is also possibly a negative impact in regard to its by-catch.

The FA concentrates on exploitation of the following internationally managed resources: tuna, swordfish and sharks. Potential associated by-catch of these fisheries are turtles and marine mammals. In order to contribute towards sustainable exploitation of these fishing stocks and respective knowledge of by-catch, an adequate catch recording system should be in place and complemented by an observer programme. As noted before, actual catch declarations show a great inconsistency and a high degree of sub-reporting. An observer programme is not implemented by GoCV, although it is referenced in the FA.

In fact no encouragement of compliance, or enforcement, of FA, or international dispositions regarding the stated resources, are foreseen from the EU authorities in relation to their fleet.

The observer programme could be easily put in place due to the operating practices of the EU fleet, with frequent periodical visits to S.Vicente for supplies, boarding of crew and transshipments. On the Cape Verde side, there has been some training of observers, but there is no real organisational scheme or roster of technicians with adequate background to carry out the tasks of an observer. In addition, the proposed salaries are considered insufficient and even though they are defined at a low level, it seems that the government does not have the financial capacity to recruit staff.

B.2.5 Summary of value added and employment benefits

B.2.5.1 Community

The present FA is estimated to generate 1,37m€ for the EC in direct value added.

Table 64 - EC Value Added

m€	Direct VA	Upstream VA	Downstream VA	Total VA
Surface Longline	0.78	0.94	0.08	1.80
Freezer Seiners	0.05	0.06	0.14	0.25
Pole & Liners	0.54	0.16	0.27	0.97
Total	1.37	1.16	0.48	3.02

The VA contribution for the different segments is very sensitive to estimated dependency (Annex **Error! Reference source not found.**) of the segment on the FA. The pole and line segment, with only an average of 15 vessels deployed (35% dependency) generates 4 times the value added for the community than the freezer seiners with 23 vessels deployed, but only 0.4% dependency.

Table 65 - EC Employment

	Upstream Employment	Direct Employment	Downstream Employment	Total Employment
Surface Longline	69	21	14	104
Freezer Seiners	2	1	17	20
Pole & Liners	105	32	49	185
Total	176	53	80	310

Community Employment due to the FA is estimated at 310 jobs, of which 17% are direct employment, 57% upstream and 26% downstream. The upstream estimate, based on per vessel multipliers from IFREMER 1999, appears excessive but there was no opportunity during the scope of this work to re-asses validity and no other more recent research has been made available.

B.2.5.2 Cape Verde

The FA generates a total of 1.98m€ in VA for Cape Verde, a large proportion of which (70%) is attributable to the surface longline sector. This is due to not only to the high contribution of the segment to total catch (and hence high attribution of financial contribution) but also significantly higher rates of employment of CV crew than for other segments.

Table 66 - Cape Verde VA

m€	Surface Longline	Seiners	Pole & Line	Total
Financial contribution	0.39	0.03	0.27	0.68
Licenses	0.11	0.06	0.01	0.18
Direct VA	0.80	-	0.22	1.02
Other Indirect VA	0.08	-	0.02	0.10
Total CV benefit	1.38	0.08	0.52	1.98

Total CV employment attributable to the FA is 121 persons (FTE), 78% of which are in the surface longline sector. There is no directly attributable upstream or downstream employment.

Table 67 - Cape Verde Employment

	Surface Longline	Seiners	Pole & Line	Total
Direct employment	95	0	26	121

B.3 EX-ANTE EVALUATION

B.3.1 Context

The key changes in the economic policy and sectoral environment that will influence a future fisheries agreement are outlined below:

- **Economic Changes**

The Government continues to pursue policies and strategies that will encourage investment, be it foreign or national. The CV Escudo will continue pegged to the Euro and this together with target economic growth of 6.5% and inflation below 3% will provide an enabling environment for investment and growth. Remittances from nationals living abroad continue to be important to the economy but the flux of emigrants may reduce reflecting changes in policies in destination countries and improved domestic investment opportunities, especially in the tourism sector. The latter, together with air transport and fisheries is expected to be the main force in national economic growth.

- **Policy Environment**

The policy environment for the sector is in the process of evolving and it is not possible to determine exactly how will change or what will be the implications for a future FPA. Indications of possible changes include:

- A re-affirmation of the availability of coastal resources for national fisheries only, including the **live-bait** fishery for the pole and line fleet, through the Resource Management Plan.;
- The separation of fisheries from agriculture & environment in the administrative structure of the state.

The GoCV intends to introduce **charges for transhipment** of product in Cape Verde ports in an attempt to increase economic benefit from the presence of distant water fleets. This is reported to be included in forthcoming fisheries regulations but there are no published indications as to what will be the basis or rate of charges.

The Government continues to withdraw slowly from investment in production (following nationalisations at the time of independence) and key privatisations in the sector include INTERBASE, a company owning 4,500tonnes of cold storage capacity in Mindelo, São Vicente. A regressive step regarding the State's involvement in production is also set to be taken with the establishment of a company with to run 10 26m project financed pole and line vessels. Share holders will consist of the State, Angolan interests and private individuals from Cape Verde. It should be noted that the development of this fleet may have some consequences for the EC dwf especially in the light of limited storage and processing capacity in Cape Verde. However indications are that the 26m vessels will spend a considerable amount of time fishing outside of Cape Verde waters and thus implication may be negligible. 5 of the vessels have already been delivered.

Outside of the fisheries sector, the Treasury are trying to keep more control over funds and ensure that remittances are necessarily clearly accounted for in Government budgets. The treasury is very much against the continuation of payments of financial contribution (targeted actions) into non-treasury accounts as not only may such payments fall off budget but also commercial banks will benefit from foreign exchange availability rather than the BoCV. The centralisation of payments may ease the administrative aspects of the payment process but will imply delays and uncertainty in the availability of funds for DGP and other target institutions from the treasury.

- **Resources and Management**

As indicated above, the Government intends to prevent the EC fleet from having access to the local live bait resource. This will have an impact on the operations of the pole and line segment.

The EU-Cape Verde fisheries agreement focuses on targeted species of tuna (in practice principally skipjack caught by purse seine and pole and line vessels) and swordfish (caught by surface longliners). There are indications that overall these Cape Verde EEZ fishery resources which are the target of vessels fishing under the EU Fisheries Agreement are not over exploited. The key questions to be addressed, in terms of environmental and fisheries sustainability, are the levels of fishing opportunities to be offered in each case.

In addition there are some resources which are not the subject of the current protocol whose exploitation could be extended. However, given the absence of resource data, development needs and increasing capacity of the national fishery sector, newly invigorated by re-established access to the EU market, there is a need to adopt a particularly cautionary approach. All inshore (including lobster) will be ringfenced for national fisheries and any diversification of possibilities must therefore look to deeper waters.

Purse seine and pole and line fishery

Assuming that current patterns of fishing are maintained, sustaining the current levels of fishing opportunities currently described within the Cape Verde EEZ would appear to have no significant impact on tuna and tuna like resources. However there will be a requirement to monitor any changes in the pattern of fishing, in respect of the species targeted by the different fishing gears. Any significant shift (for example to greater targeting of yellowfin by purse seining) would require a re-assessment of this position, especially if it were to result in an increase in the proportion of bigeye tuna catch attributable to the EU fleet fishing effort.

Longline fishery

A precautionary approach to the continuation of longline fishing opportunities is justified on the basis of the concern over shark stocks and the by-catch of turtles. Due to the incomplete uptake of fishing licences, it is probable that a reduction in the number of Cape Verdean fishing opportunities could be sustained by the fleet, without impacting significantly on the swordfish catches. A modest reduction could therefore be considered justifiable in terms of preventing an increased utilisation of licences, which would result in an increase in both shark catches and turtle by catch. Therefore one scenario to be considered would be a reduction in the numbers of licences to those which are currently utilised.

Furthermore, a new protocol should also endeavour to implement the ICCAT Resolution 1/11 on Atlantic sharks and although there are no international management means recommended, it should also endeavour to address the by catch rates of critically endangered turtle species. Participation of EU vessels in the surface longline fishery under a future protocol should therefore be conditional on:

- Mandatory reporting of catches of shark species (requiring modification of the reporting forms) and ensuring adequate distinction between the mako and porbeagle, given the possible use of Spanish “marrajo” for both species. This will require the introduction of modified reporting forms;
- Implementation of a discard ban on certain species of sharks, with the priority being the blue and mako sharks;
- Mandatory reporting of catches of turtle species (requiring modification of the reporting forms);
- Implementation of a discard ban on dead turtles;
- Introduction of a mandatory observer programme to measure all by catch and gather biological data

- **National fleet**

The national tuna fleet will continue to expand with the delivery of five more 26m pole and line vessels (making a total of 10). There are signs that the vessels may spend much (or even all) of the year outside of

Cape Verde waters and it remains to be seen to what extent presence of these vessels will impact local tuna resources.

- **Fisheries Partnership Opportunities**

It is considered likely that a future protocol will differ from the current in the following respects:

- The opportunity for **demersal longliners** will be withdrawn as it has not been utilised;
- As indicated above, the Ministry intends to prohibit EC Pole and Line Vessels from fishing for **live bait** in CV waters. Although dependency on the CV livebait resource may not be high⁴⁵, the latter will have implications for the operation of the EC pole and line fleet in Cape Verde waters and result in fishing days being lost to steaming to Senegal, Mauritania or Guinea Bissau specifically to fish for live bait and a corresponding increase in fuel and oil consumption. Although many of the pole and line vessels fishing in Cape Verde are also licensed for Senegalese waters (making the fishing for bait in Senegal legally possible) there will be negative implications for the Senegalese small pelagic resource (already reported to be under pressure).
- The Ministry will aim to oblige a proportion of the **tuna** catch of the EC in CV waters to be **landed** in CV for sale to local processing industry (and not just for transshipment as in the current protocol), in an attempt to increase national added value and investment. The short term the feasibility of such a move will depend upon the status of local cold storage facilities. It should be noted that this will be focussed on the Pole & Line and Seiner segments;
- The Ministry is interested in the development of mechanisms to encourage **joint enterprises** in the CV fishing industry, especially in the fish processing sector;
- There may be an opportunity to introduce **experimental fishing** for deepwater species (crabs, black scabbard). The opportunity will only have value if there are EC vessel owners interested in this fishery;

- **Interest of an FPA for partner country**

Financial and Economic

Cape Verde continues to have only limited national capacity to exploit large pelagic resources, both in terms of fleet and processing/storage infrastructure. In the absence of such capacity, the government continues to be interested in gaining rent from the EEZ resource by allowing access to distant water fleets. There is therefore willingness in the GoCV to negotiate a further protocol to allow continued access to the EC fleet and continued inflows of financial contribution payments. Income generated from EC dwf license fees together with financial contribution payments corresponds to approximately 10% of total investment budget in the fisheries sector (including donor contributions) and 105% of the treasury contribution to the fisheries investment budget. Additional secondary benefits from financial payments which GoCV is keen to see continue include access to foreign exchange.

In the future the GoCV would like to see increased national value added from an FPA, principally through increased supply of tuna to local processing industries and further investment in downstream infrastructure. The fact that adequate processing facilities exist (with another under rehabilitation) is an opportunity for the GoCV to take a firmer position on the issue, and try to make access conditional to local sales. However, for this opportunity to be maximised further investment will be necessary in cold storage facilities.

Socio-economic

An FPA has an important place in increasing socio-economic impact in the partner country and therefore the interest of an FPA for the partner country. This relates mainly to the impact on employment and on

⁴⁵ The Commission's comments to the Draft Final Report on Cape Verde, August 2004

utilization of onshore infrastructure which will bring indirect employment and local value added from the services.

In the future there is the potential for maintaining, or increasing, the uptake of fishermen integrated as crew members in the EU FPA fleet. Cape Verdean crews are becoming common in EU fisheries which opens up, even more, the interest of the foreign fleet in contracting local fishers. In addition DGP continues to support the training of crews to appropriate internationally recognized (and certified) standards.

There is opportunity to increase the use of port infrastructure, due to the refurbishment of several infrastructure (ports, modernized shipyards, supply services available, amongst others). In addition there are privatization plans in the short-term for the port company ENAPOR, and of INTERBASE the cold storage facility. It is noted by several parties that EU longline and pole & line fleet has expressed their interest in increased use of the port of S. Vicente. Reasons given when comparing with other usually more utilised ports (Dakar), refer to closer proximity to the fishing grounds thus creating increase of productivity, more tranquillity and safety during port operations and more available space in the port structure, amongst others. Increased use is already technically possible but significantly increased benefit to Cape Verde from such developments will only be secured should cold storage be upgraded to EU standards, thus opening the possibility for sales of fish for local processing.

B.4 POTENTIAL MONITORING INDICATORS AND THEIR INSTITUTIONAL BASIS

The following monitoring indicators are recommended for assessment of on going effectiveness and efficiency of a future FPA. It should be noted that one of the most important aspects of monitoring will be the establishment of a base or target set of values for all the indicators **at the time of negotiation**. In the absence of target values there will be no meaningful context by which progress and achievement can be assessed.

	INDICATORS	TYPE	Data Sources	Correspondent Institution
1: Contribution from the FPA as a result of the presence of the EC distant water fleet	% of EC dwf fleet deployed in Cape Verde (by fishery) Number of vessels deployed (by fishery) Utilisation of possibilities (by fishery)	% N° %	EC records EC license requests Calculated	EC Delegation, Cape Verde
2: Contribution from the FPA to employment and value added	EC direct VA (from multipliers) EC indirect VA (from multipliers) EC direct employment (from multipliers) EC indirect employment (from multipliers)	€ € N° N°	Declared catch data License requests and declared catch data License requests and declared catch data	
3: Contribution from the FPA to employment and infrastructure development in the partner country	Cape Verde direct employment Local investment By fishing companies associated with FPA Through use of financial contribution Supply of raw material from EC vessels to CV processors	N° N°, type, value € of investment projects N°, type, value € of investment projects Tonnes/yr	Local crew agencies Operating company data DGP/GEP DGP	DGP EC Delegation
4: Contribution to Community market stabilization	Supply to EC markets (by major species) from FPA fleet % of total EC consumption	tonnes, € %	Declared catch data Eurostat, EC records. Calculated	
5: Contribution from the FPA to National Budgets and programmes	Community financial contribution Pure compensation Targeted Actions Financial contribution as % of Cape Verde GDP Financial contribution as % of Fisheries Ministry budget	€ € € ⁴⁶ % %	FPA FPA, EC payment records FPA, EC payment records, DGP Reports National records, Calculated DGP/GEP Calculated	EC Delegation EC Delegation EC Delegation
5: Contribution from the FPA to management and institutional	Training supported Data published		Ministry/DGP report	EC Delegation EC Delegation

⁴⁶ Periodic monitoring must show declared expenditure

	INDICATORS	TYPE	Data Sources	Correspondent Institution
strengthening	Status of inspection system MCS capacity, infractions verbalised	Quantitative (nb, nb, nb and %)		EC Delegation EC Delegation
6: Contribution of the FPA to the implementation of responsible fishing practices in the partner country	Number of vessels reporting data Quality of data Scientific publications in peer reviewed journals Functional observer scheme By-catch quantities (especially cetaceans(if any), turtles)	% of fleet by segment qualitative Quantitative (nb) Quantitative (observer days at seas, vessels “observed”, ..) Quantitative,	Operator catch declarations DGP report? Ministry Report ICCAT, operator catch declarations, observer reports, DGP	EC Delegation EC Delegation EC Delegation
7. Contribution of the FPA towards supporting food security	Supply to Cape Verdean markets (by major species) from FPA fleet	Quantitative: tonnes of fish to local market Per capita fish / protein consumption	Ministry Report, Operating company catch data, FAO National statistics	EC Delegation
8 Contribution of the FPA towards overall poverty reduction in the partner country	Strengthening of human capital: Training of: fishermen / fish processing, distribution and marketing personnel / harbour staff / vessel repair and construction personnel. Strengthening of social capital: support to fishing communities (gear, marketing, processing and distribution infrastructure) Strengthening of natural capital: Results of control and conservation of fish stocks; Strengthening of financial capital: financial credit programmes in the fisheries sector (artisanal fishing, artisanal and semi-industrial processing and marketing, artisanal vessel construction) Strengthening of physical capital : supply of fishing gear, vessels, artisanal fish processing equipment (dried, chill, and frozen), distribution vehicles;	Qualitative € investment for each; N° of people in training Qualitative € investment for each; N° of communities receiving support - Socio-economic characterisation of target communities (N° families benefiting / average household composition of community, average annual income of community); N° of Infringements detected and actions undertaken / TACs, closure periods by species / identified and quantified by-catch and discards by fleet segment; Qualitative € investment for each; N° of people benefiting; N° of families which benefit in relation with socio-economic characteristics (by average household composition and annual income) Qualitative € investment for each; N° of people benefiting; N° of families which benefit in relation with socio-economic characteristics (by average household composition and annual income)	Donor research reports, food balance sheets	EC Delegation

C CONCLUSIONS AND RECOMMENDATIONS

C.1 EX-POST EVALUATION

The principal conclusions with respect to the current protocol are as follows:

C.1.1 *Community Fisheries Sector*

- **Deployment**

The protocol provided opportunity for the deployment of up to 117 vessels from the EC distant water fleet targeting highly migratory pelagic species. Dependency on the FA is estimated to be high for the Pole and Line fleet (35%) and very low for tuna seiners (0.4%), but for all segments the FA forms an important part of a regional network of agreements allowing the fleet to follow stock migrations.

- **Utilisation**

Utilisation of the possibilities provided for in the protocol was in general high, averaging 77% (90 vessels) over the protocol to date. Possibilities have been well used in the surface longline segment (88%) but show a decrease for 2003. Pole and line utilisation is also high at 83%. In the freezer seiners segment utilisation has been lower but relatively consistent, averaging 56%. In the demersal longline segment, one license was sold in the first year of the protocol according to EC records, but none according to DGP.

- **Product**

Catch attributable to the FA is estimated to be 2,300t per year. This is made on the basis of reported data, plus an estimate for the Pole and Line segment on the basis of data collected under this study. Although catch is not significant in terms of the total EC market, the FA is still considered to be important as part of the regional network of agreements.

- **Value Added**

Total value added accruing to the Community attributable to the FA is estimated at 3,02m€/yr, giving a net benefit of 2,26m€/yr after accounting for financial contribution and administrative costs. A high proportion of the net benefit (60%) is attributable to the surface longline sector. Jobs are provided for a total of 53 EC crew and 256 persons in EC upstream and down stream employment.

C.1.2 *Cape Verde*

- **Value Added**

Value added accruing to Cape Verde is estimated at 1,98m€ per year, resulting a net economic benefit of 0,54m€/yr. Almost all of the net benefit accruing to Cape Verde is attributable to the Surface Longline Segment, primarily on account of high employment of Cape Verdean crew. An estimated 121 jobs for local crew are secured by the FA, but the actual levels of employment of Cape Verdean crew on EC vessels is about double this value.

- **Financial contribution**

The protocol sets out 680,000€/yr in financial contribution, giving a rent to the government (together with licenses) of 20% of catch value. This is considered to be higher than would accrue to the government should the resource be exploited by national fishers.

The payment of financial contribution has been problematic with large delays in the disbursement of funds under the programme of targeted actions. Of the funds that should have been disbursed to date, according to

the schedule set out in the protocol, up to 25% (510,000€) are in arrears. This is equivalent to more than 2 years of funding for targeted actions, and the achievements under the programme have been correspondingly affected.

The inclusion of a targeted actions programme has helped DGP secure funds but at the same time the mechanism for payment (via non-treasury accounts) has both increased administrative load for the EC and increased problems of acceptability by the treasury in Cape Verde.

- **Investment**

The current protocol has not succeeded in promoting investment in Cape Verde, neither investment from operators working within the protocol nor from the application of funds for targeted actions. The fish exports embargo from the EU and the lack of adequate cold storage facilities is also recognised as a fundamental obstacle to foreign investment. The present new situation with the lifting of the ban and potential privatization of the main existing facility in the port of S. Vicente, with a clear attempt to provide incentives to private investment and restructure of that infrastructure may create an interesting opportunity for investors in this field. There may also be interest from the EU fleet owners in creating conditions for a more supportive structure of the fleet.

- **Institutional Development**

Through the targeted actions programme the FA should have had some impact on institutional development through support for training, seminars etc. The low levels of disbursement of funds under the targeted actions programme has made the actual impact almost insignificant,

- **Poverty Alleviation and Food Security**

The agreement has had no direct impacts on food security, without provision of supplies for domestic market. In respect to poverty alleviation the provisions and formulation of the agreement did not contribute a clear impact, however the dimension of employment involved (about 20% of Cape Verde industrial and semi-industrial fleet) reveals that the impact is rather significant, although does not suggest involvement with fishers from remote communities where poverty is widespread.

C.1.3 Promotion of Responsible Fishing

With respect to the promotion of responsible fishing, the actual catch reporting and organisation system does not contribute to ensure and control sustainable exploitation of the fishing stocks under target. There is also considered to be a negative impact in regard to by-catch, mainly turtles, frequent in this area.

Actual catch declarations show a great imprecision, but it should also be underlined that register forms are not adequate for the operation of the EU longliners, the bulk of whose catch is made up of shark in spite of the fact that in principle they target swordfish. This also leads to an inconsistency of the FA when it considers the protocol as a tuna fisheries agreement. In addition an observer programme is completely nonexistent.

The FA has supported MCS activities, but as mentioned above activities under the targeted actions programme have been limited by low disbursement of funds.

C.2 RECOMMENDATIONS FOR A FUTURE PROTOCOL

C.2.1 General

- **Payment of financial contribution**

Payment of financial contribution is better represented in national accounts should it be paid into a treasury account as opposed to individual ministry accounts. This may delay access for the beneficiary ministries and

institutions but should facilitate the disbursement process for the commission. Should GoCV insist the targeted actions are not paid to the treasury, a single account should be indicated.

The identification of a single account should help the process of advancing the payment of targeted actions for a given year - according to DGT records even the targeted actions for the first year of the current protocol are yet to be completely paid. In addition it is recommended that targeted actions should be paid by DG Budget under one line, rather than split into four sub-budgets. It is not considered that this would result in less transparency as to how funds are applied and it would ease not only payment procedures but also the process of changing allocation between sub-budgets should the need arise.

Delayed disbursement of funds has severely limited the impact of the targeted actions programme. Both the Commission and the Delegation in Cape Verde should continue to maintain pressure on the Ministry to comply with reporting and account identification procedures.

- **Possibilities by Segment**

It is recommended that possibilities for a future protocol are based upon current average levels of *current utilisation*, as there is no evidence to suggest that an increase over the amount of currently applied effort can be sustained by the target resources. This would imply a maximum of 15 licenses in the pole and line segment, 21 freezer seiners and 54 surface longliners. There are valid concerns over the environmental impact of the surface longline segment principally due to the unknown status and vulnerability of shark resources and by catch of critically endangered turtle species. These concerns may justify a further precautionary reduction in the number of licenses for this segment, and this is modelled in the ex-ante scenarios (see below).

- **Surface longlining target fishery as indicated in the protocol**

The surface longline segment is clearly not targeting tuna-like species, contrary to the implications of the current protocol. It is recommended that any future protocol should reflect the true nature of the fishery and its focus on sharks and swordfish. It is also recommended that license fees payable by the segment be modified to reflect the true value of catch which is over two times that of other segments of the fleet.

- **Longline Segment**

Environmental concerns indicate that the participation of EU vessels in the surface longline fishery under a future protocol should be conditional on:

- Mandatory reporting of catches of shark species (requiring modification of the reporting forms) and ensuring adequate distinction between the mako and porbeagle, given the possible use of Spanish “marrajo” for both species
- Implementation of a discard ban on certain species of sharks, with the priority being the blue and mako sharks.
- Mandatory reporting of catches of turtle species (requiring modification of the reporting forms)
- Implementation of a discard ban on dead turtles
- Introduction of a mandatory observer programme to measure all by catch and gather biological data

- **Catch statistics and reporting**

There is considerable scope for the improvement in the reporting of catch statistics both from the EC fleet and from GoCV.

Stronger measures need to be taken by both the Commission and GoCV to ensure that data are reported by the EC fleet, even to the extent of making license renewal conditional on complete catch reporting for the previous period. In the case of the tuna vessels, EU vessels should fill-in the fishing log books in accordance with the headings already provided, regarding consistency with the ICCAT norms. However for the longliners

there is an urgent need to alter the forms utilised, which also includes the actual ICCAT forms. More detail on shark species and by-catch of turtles, sea-birds and marine mammals should be noted.

GoCV should be urged to improve the reporting of catch statistics for other vessels operating in CV waters (such as the Japanese and Senegalese fleets). It is considered that adequate human and technical capacity already exists for this purpose in DGP.

- **Supply of product to national industry**

The GoCV intends to oblige the sale of part of tuna catches in the EEZ to supply national industry in order to increase local value added from the protocol and alleviate raw material supply problems for local processing industries. However the present day lack of suitably licensed cold storage indicates that this will not be technically possible by the time the protocol is renewed. It is recommended that the next protocol should not include an obligation to sell catch to national processors.

It should be noted that the French seiner fleet is opportunistic in its marketing strategy and even in the absence of a conditionality clause obliging sales, it is considered that the fleet could supply Cape Verde processors immediately should prices be correct. There is however clearly a problem of communication between Cape Verde processors and EC operators, and this is considered to be an area where the trade secretary in the Delegation in Cape Verde should play an important facilitating role. The processing industry has already made one approach to the delegation to this effect (attempting to secure raw material from the EC fleet) but without results.

There may be opportunity for an input from CDE (Centre for the Development of Enterprise) in order to establish links between CV processors and EC vessel operators, as well as to increase knowledge amongst EC processors of investment opportunities and climate in Cape Verde.

- **Promotion of Responsible Fishing**

It is recommended that the project already under negotiation between the Commission and GoCV for the installation of a national VMS system on longliners and tuna vessels is implemented. This should also include an appropriate training program in order to work with the equipment. In addition implementation of a functional reporting system and improved catch statistics is recommended, complemented with adequate reporting forms and an observer program applied to the longline fleet.

A comprehensive MCS program is potentially viable, given that the country has suitable air and naval means to undertake operations and that a significant proportion of the fleet calls into Cape Verde ports. However recent history indicates that the implementation of an observer programme is in reality either not a GoCV priority or is beyond their current administrative capacity. There may be opportunity for short term technical assistance to help GoCV establish a sustainable MSC programme and this should be considered along with the implementation of the VMS system.

- **Hiring of crew members**

Hiring of crew members was revealed to be one the most positive factors of the FA, with a high rate of uptake. To strengthen employment of Cape Verdean seamen a survey should be done identifying actual fishers with provision of complete individual information (name, social security data, certified vocational training, etc). Advanced and specialised training programs should then be made available for this workforce while they are on land in between sea campaigns. Utilisation of fisheries training institutions in Spain and Portugal is also an eventual possibility to strengthen the technical skill and knowledge of fishermen and their awareness for safety.

Also a better organised recruitment process targeting fleets operating out of Cape Verde could be made available, and therefore creating opportunities for an increased number of jobs at sea.

C.3 LIST OF RELEVANT LEGISLATION

Decree 1/2003 establishes the fishermen's national day;

Resolution 3/2003 establishes the legal regime for natural protected areas;

Law-Decree 19/2003 establishes the legal regime for chartering of foreign fishing vessels;

Law Decree 30/2002 Government Organic Law;

Law-Decree 4/2000 approves the Regulation for the registration of maritime and fishing activities;

Law-Decree 9/99 establishes the EEZ Surveillance Fund;

Order 58/98 establishes competencies of the National Institute for the Fishery Development;

Law-Decree 37/98 regulates the registry of vessels;

Law-Decree 39/98 establishes the methods for calculation of fishing vessel tonnage;

Law-Decree 67/97 approves the new Statute of the National Institute of Fisheries Development (INDP-Instituto Nacional do Desenvolvimento das Pescas) which revokes Decree-Law 123/92;

Resolution 38/V/96 approves the Convention regulating fishing activity within the waters of the Member States (Guinea Bissau, Senegal, Gambia, Mauritania, Guinea and Cape Verde);

Law-Decree 25/94 creates the Fund for Fishing Development;

Law-Decree 26/94 creates the Integrated Fund for Assistance to Fishing Productivity;

Law 86/IV/93 Framework Law on Environment regulated by Law-Decree 14/97;

Law 92/IV/93 establishes incentives for export and re-export activities;

Law 99/IV/93 free zone enterprise law;

Law 60/IV/92 defines the delimitation of the maritime areas of Cape Verde;

Law-Decree 33/92 establishes competencies of the Ministry of Fisheries and Agriculture;

Law 90/IV/93 foreign investment Code;

Decree 55/90 defines industrial fisheries vessels and identification rules;

Law-Decree 17/87 defines the general principles of the fisheries resources amended by **Law-Decree 72/92**;

Law-Decree 97/87 regulates Law-Decree 17/87;

Order 58/87 approves fisheries taxes table.

C.4 PERSONS MET

Date	Person	Position	Institution
18/05/04	Sorribes Manzana	EU Delegate	EU Delegation
18/05/04	Edelmira Carvalho Patricia Alfama Ivone Lopes	Director of Fisheries Head of Legal, Quality and Surveillance Department responsible for National Environmental Plan	Direcção Geral das Pescas
18/05/04	Manuel Pinheiro	General Director	Direcção Geral do Planeamento
18/05/04	Francisco Tavares	President	Instituto Nacional de Estatística
20/05/04	António Fortes	Comandante	Guarda Costeira
20/05/04	Leão Carvalho	Coordenador	Secretariado Executivo para o Ambiente (SEPA)
20/05/04	Patrícia Alfama	Técnica Superior	DGP (Direcção Geral das Pescas)
20/05/04	Natacha A. Rosa	Responsible for statistics	Direcção Geral das Pescas
20/05/04	António Fortes	Comander	Guarda Costeira
21/05/04	Óscar Melício Vanda Marques Carlos Monteiro	President responsible for tuna resources and ICCAT Head of Statistics Department	Instituto Nacional de Desenvolvimento da Pesca
21/05/04	Nelson Santos	President	Associação de Armadores da Pesca de CV
24/05/04	Manuel C. Monteiro	Capitão dos Portos	Capitania de Barlavento
24/05/04	Edério Almada Péricles Martins Oksana Pastor	ex-President Fisheries Technologist (responsible for research vessel) responsible for stock assessment (lobsters and small pelagics); participated in research cruises	Instituto Nacional de Desenvolvimento da Pesca
24/05/04	Manuel Monteiro	Captain of Ports of Barlavento	Autoridade Marítima / Direcção Geral de Marinha
24/05/04	Carlos Santos Lopes	Managing Director Director	LUSONAVE / ONAVE
24/05/04	Miguel Pinto Diva B. Gomes	President Financial Director	FRESCOMAR
25/05/04	Manuel O. Monteiro	Director Operações	ENAPOR SA
25/05/04	Elísio Costa Neves	Director	Alfândega de São Vicente
25/05/04	José Lima	Director	Agência LIMAGE Lda
25/05/04	José Luís Rocha	Head of Operations	INTERBASE
25/05/04	José Patrício Silva	Commercial and Marketing Director	CABNAVE
25/05/04	Manuel Monteiro Alcídio Lopes	Director of Operations Head of Commercial Department	ENAPOR
25/05/04	Elísio Costa Neves	Director	Alfandega (Customs)
25/05/04	José Lima	Director	LIMAGE
26/05/04	Emanuel Moreira	Resource management and Planning Director	Direcção Geral do Tesouro
27/05/04	Alcides Kanudo	Head of Administration	EU Delegation
28/05/04	Manuel Amante da Rosa	General Director	GEDA (Cooperação Internacional)
28/05/04		Minister of Environment, Agriculture and Fisheries	Ministério da Ambientes, Agricultura e Pescas
28/05/04	Daniel Lobo	Director of Statistics	Alfandega (Customs)

31/05/04	José M. da Graça	Presidente C. Administração	Agência ANAVSI SA
31/05/04	Carlos Medina	Director	Agência GLOBO Lda

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